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IN NATURE'S WAYS

MARCUS WOODWARD





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IN NATURE'S WAYS

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Times.

IN NATURE'S WAYS

A BOOK FOR ALL YOUNG LOVERS
OF NATURE

BEING AN INTRODUCTION TO GILBERT WHITE'S
"NATURAL HISTORY OF SELBORNE"

BY

MARCUS WOODWARD

JOINT-AUTHOR OF

"WOODCRAFT"; "GOING ABOUT THE COUNTRY";

"A GAMEKEEPER'S NOTE-BOOK"; ETC.

ILLUSTRATED BY

J. A. SHEPHERD

London

C. Arthur Pearson Ltd.

Henrietta Street

1922

First published . . . 1914
Second Impression . . . 1922

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PREFACE

THIS book was planned and written with the purpose of introducing young people to Gilbert White's "Natural History of Selborne," and to encourage the study of that immortal work.

From earliest days of reading, when I learned to love this book, though I could not understand it, and would absorb myself for hours and days in its pages (pardoning, for the sake of the information, as Gilbert White once asked his original reader to do, the "quaint and magisterial air," and reading on with ever new delight at his ideas—ideas of "everything that is rural, verdurous, and joyous"—), I have always thought that a child's "Selborne" was needed: in the same way as was a child's Bible, and a "Tales from Shakespeare"—not only an expurgated edition, but one with a simple running commentary of notes and explanations. The book is not suitable for young readers, or readers young in the study of the natural history of an English countryside. The quaint and sometimes magisterial air of some of the letters, their geography and their geology, make them hard reading; the book is like a country ringed about by rugged mountain barriers which keep many travellers from the delectable valleys of the interior. Yet how full of delight for all young lovers of Nature, how full of the sense of "everything that is rural, verdurous, and joyous," like the field-cricket's song, are selected passages! In almost every page is some glowing passage, an observation, an anecdote, a piece of curious reasoning, of eternal truth

and beauty, making as sure appeal to young minds as to those strong enough to scale mountains of difficulty—as that simple story of the little girl who, as she was going to bed, used to remark on hearing the distant murmuring from a rookery, “that the rooks were saying their prayers.” In the selected passages a teacher may find golden lessons indeed, for the children’s reading or writing.

I have chosen the passages on the general plan of giving those which express simple truths, so that any teacher may take them at random, and be sure that they will serve for lessons, a word which in such a case will lose its usual meaning to children. I have avoided passages where the information given, or the theory advanced, is faulty in the light of newer knowledge, but this only as a general rule; for those who understand Gilbert White and his writings and his times find no fault with his faults, and feel that much of the charm of the letters lies in his doubts, questionings, tentative theories, half believed in and half disbelieved, his groping in the darkness of his age after the truth—by which he teaches us how to deduct and reason.

Should Fates prove kindly, I hope to be able to publish a second and more advanced volume, including all the now neglected pages in the “History” which fall into the general plan of the work—to be an introduction (if I may emphasise my purpose) to one of the greatest books in the whole world.

M. W.

DITCHLING,
SUSSEX, 1914.

NOTE.—The quoted passages throughout this book are in smaller and darker type than the commentary intended to amplify and explain, supply some missing links in a story’s chain, and give a fuller understanding. Many of the passages are composite; and where it seemed advisable sentences have been deleted, and some difficult words deleted or translated.

FOREWORD

By WILFRED MARK WEBB

F.L.S., F.R.M.S., Secretary of the Selborne Society, Editor of *Knowledge*.

GILBERT WHITE'S "Natural History of Selborne," in spite of the pleasing writings of the many followers in his footsteps, still stands alone. It is the only book on Natural History pure and simple which has become a classic; it appeals to everyone; it has gone through more than one hundred and fifty editions in very much less than that number of years; it records many discoveries; and, as Gilbert White tells what he has himself noticed, there are, even at this later period, very few mistakes to be corrected.

For a long time Mr. Marcus Woodward has felt that Gilbert White's words and the results of his work should be made familiar to young people, and he has now put together a book to which I am with pleasure writing the present introduction. Mr. Woodward rightly thinks that the reading of the "Natural History of Selborne" as it stands is too much of an undertaking for the ordinary juvenile. As, however, it was made up of letters written to two correspondents and deals with topics more or less as they presented themselves, it lends itself very well to the process of making extracts.

Not only have those been skilfully chosen which appeal to the youthful mind, but Mr. Woodward has here and there explained the meaning of a word, as well as written a number of chapters which they will thoroughly enjoy. His whole aim has been to lead

young people to take an interest in what Gilbert White found worthy of attention, to introduce them to the pages on which, in delightful language, his ideas are set down, and to encourage the making of original observations.

The amusing drawings with which Mr. J. A. Shepherd has illustrated Mr. Woodward's remarks add very considerably to the attractiveness of the book ; and all true Selbornians will hope that Mr. Woodward's attempt will be even more successful than he hopes, and bring many new recruits to their ranks.

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WHITE OF SELBORNE

THE Rev. Gilbert White was born in the village of Selborne, in Hampshire, on the 18th of July, 1720, in the house where afterwards he lived, and where he died, a bachelor, in the 73rd year of his age, on the 26th of June, 1793.

He lived in seclusion, occupying himself by keeping his diaries, studying all the life of his parish, performing light clerical duties, and corresponding with his friends: and little is known of him, though his letters on the natural history of Selborne have brought him immortal renown.

It is in those letters that the man himself is best revealed: a good, kindly man, cheerful and social, very temperate in habits, full of wonder and admiration at the works of Nature, a friend of the poor, much respected by his neighbours, a scholar and a gentleman. His life passed with scarcely any other vicissitudes, we are told, than those of the seasons. His love of his beautiful native village, and its wild life, made him decline all offers of preferment. Few personal reminiscences remain: among the most pleasing of them is the humble testimony of an old dame who had nursed several members of the family, that he was a "still, quiet body," and that "there wasn't a bit of harm in him, I'll assure you, sir—there wasn't, indeed!"

A February Day

Sooth'd by the genial warmth, the cawing rook
Anticipates the spring, selects her mate,
Haunts her tall nest-trees, and with sedulous care
Repairs her wicker eyrie, tempest-torn.

The happy schoolboy brings transported forth
His long-forgotten scourge, and giddy gig :
O'er the white paths he whirls the rolling hoop,
Or triumphs in the dusty fields of taw.

Gilbert White.

Rooks

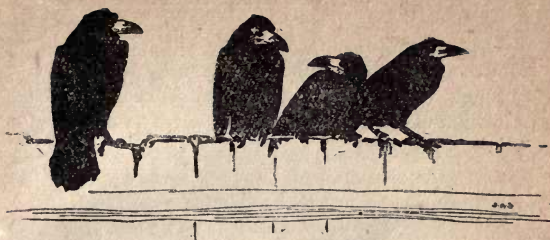
Rooks are continually fighting, and pulling each other's nests to pieces : these proceedings are inconsistent with living in such close community. And yet, if a pair offer to build in a single tree, the nest is plundered and demolished at once.

Some rooks roost on their nest-trees.

The twigs which the rooks drop in building, supply the poor with brushwood to light their fires.

Some unhappy pairs are not permitted to finish any nest till the rest have completed their building. As soon as they get a few sticks together, a party comes and demolishes the whole.

As soon as rooks have finished their nests, and before they lay, the cocks begin to feed the hens, who receive their bounty with a fondling, tremulous voice, and fluttering wings, and all the little blandishments that are expressed by the young, while in a helpless state. This gallant deportment of the male is continued through the whole season of incubation.—G. W.



When Rooks Start Housekeeping

At the end of February and early in March the rooks return to their nest-trees, and begin to rebuild their leaky cradles—with much excited clamouring and cawing, plundering and marauding.

The nest-trees may have been deserted since the summer before. Rooks like to nest high, and in winter when trees are leafless the exposed nests would be draughty roosting-places. So they go into winter roosting-quarters, several rookeries often joining forces, occasionally—perhaps every day—paying visits to the real home.

Early in the following year many gallant young rooks anticipate the spring, little thinking of what trials housekeeping will bring, and what they will suffer from the cunning old freebooters who will steal their collection of sticks. Some of the young male birds may not find sweethearts, for all their gallant wooing and eloquent cawing. These disappointed lovers may then go into bachelor quarters apart, a rollicking, happy-go-lucky crew.

When nesting begins, you may know the old birds from the young, callow housekeepers by the masterly, thorough way in which the experienced ones take possession of their old nests. The calm assurance of a



A young rook "asking for more," like Oliver Twist

pair tells that they have been partners and occupied that nest in past seasons: and though they may plunder they are not plundered. Usually one of the pair stays on guard while the nest is being built, the other going alone to collect material. Rooks are very faithful birds, and the same pair will go season after season to the same nest.

It may not be until the nests are finished, or even until the eggs are laid early in March, that the rooks stay at night in the rookery. In the evening, when it is time to go to the roosting-place, we see that some are nervous about departing, fearful lest they shall be plundered when they go. And sometimes a cunning rogue does linger behind, or returns after others have departed, hastily to snatch a few sticks from a neighbour's collection.



Rooks display extraordinary antics in their wooing.

When these building troubles are ended, and the great nest, about two feet across, is finished, and lined with dry grass or moss, it is very pleasant to hear the soft "caw, caw" of the stay-at-home wives when their faithful mates come in to feed them with food picked up far away. Then we hear a peculiar deep gruff note from the incoming bird, as he pitches and rolls homeward against the March gale: his beak being so crammed with food that he cannot announce his return very clearly.

At last the eggs are hatched—the four, five, or six large bluish-green eggs, blotched with brown and purple. And then a new note is heard from the heights of the clanging rookery—a treble, callow cawing, telling of hungry young rooks safely out of the shell. Each parent must now work to hunt for worms and grubs for the large-mouthed youngsters.

When the first brood is fledged, the happy family party leaves the old nest-tree, and the young rooks learn to forage for themselves. In the evening the different family parties return in a vast flock, with great cawing, to fly several times round the nests, until, when all are assembled, they settle down noisily for the night.



The Missel- Thrush

The people of Hampshire and Sussex call the missel-bird the storm-cock, because it sings early in the spring, in blowing, showery weather. Its song often commences with the year: with us it builds much in orchards.

The missel-thrush is, while breeding, fierce and pugnacious, driving such birds as approach its nest, with great fury, to a distance.

The Welsh call it *pen y llwyn*, the head or master of the coppice.

He suffers no magpie, jay, or blackbird to enter the garden where he haunts, and is, for the time, a good guard to the new-sown legumens [peas, etc.].

In general, he is very successful in the defence of his family; but once I observed in my garden that several magpies came determined to storm the nest of a missel-thrush. The dams defended their mansion with great vigour, and fought resolutely; but numbers at last prevailed: they [the magpies] tore the nest to pieces, and swallowed the young alive.—G. W.



He suffers no magpie, jay, or blackbird to enter the garden where he lives

The Gallant Storm-Cock

MASTER of the Coppice!—this noble title is well deserved by the gallant bird, well called also, storm-cock.

We do not often find him defeated, as by the magpies in the story : he will drive a rook from his nest, and attack jackdaws—cunning birds which still may succeed in sucking the thrush's eggs. One brave mother missel-thrush was seen to attack a rat which climbed to her nest, driving at the robber with such fury and force as to strike him from the branch where he crouched.

The storm-cock is the bravest and largest of our six thrushes : in length he measures some eleven inches, or three inches more than the song-thrush. The upper parts are greyish brown, the back greyer than the song-thrush's, the under parts are white, just tinged with yellow, and on the throat and breast are numerous black spots. When flying the missel-thrush shows the white feathers on either side of the tail.

From midwinter to the time of white violets his clear, loud, ringing notes are often heard, as he sits on the topmost branch of a tall tree. He utters a very

harsh cry—like a rattle. A wary bird, when nesting he falls silent until disturbed, when by his clamour he tells the secret of his nest's whereabouts.

But the secret usually is easily discovered, as the nest is set clearly in view, often on a fork high against a tree-trunk: a large, somewhat untidy grassy and mossy structure, plastered within, like the song-thrush's, but lined with dry fine grass. There are four eggs, very different from the blue black-marked song-thrush's eggs, being blotched and spotted over with purplish and brownish marks on a greyish-green ground.

After rearing their two or three broods the missel-thrushes in midsummer begin roaming in small parties about open country,—“they retire,” as Gilbert White said, “to sheep-walks and wild commons.”

In autumn they delight in eating yew-berries. Other favourite fruits are the berries of mountain-ash, haws, and ivy-berries. But when not tempted by fruit, the missel-thrush is a great devourer of worms, snails, grubs, and all sorts of insects.

Gilbert White noticed that they do not destroy the fruit in gardens, like others of their kind, and that they feed on the berries of mistletoe—whence the name, mistletoe, or missel-thrush.



Milk-White Rooks

“A gentleman in this neighbourhood had two milk-white rooks in one nest. A booby of a carter, finding them before they were able to fly, threw them down and destroyed them, to the regret of the owner, who would have been glad to have preserved such a curiosity in his rookery. I saw the birds myself nailed against the end of a barn, and was surprised to find that their bills, legs, feet, and claws were milk-white.”

The Timid Wheatear

Vast quantities are caught about harvest-time on the South Downs near Lewes, where they are esteemed a delicacy. There have been shepherds, I have been credibly informed, that have made many pounds in a season by catching them in traps. And though such multitudes are taken, I never saw (and I am well acquainted with those parts) above two or three at a time; for they are never gregarious. They may perhaps migrate in general; and, for that purpose, draw towards the coast of Sussex in Autumn; but that they do not all withdraw I am sure, because I see a few stragglers in many counties, at all times of the year, especially about warrens and stone quarries.—G. W.

THE wheatear is so timid a bird, that the mere shadow of a cloud, skimming across the open downland it haunts, is enough to send it running to shelter in some little hollow. This habit was well known to the South Down shepherds of olden times, when wheatears were more plentiful than now, and could be trapped in large numbers in horsehair snares.

A famous old-time shepherd, named John Dudeney, who tended his sheep on those Downs a hundred years ago, recorded how a shepherd near Beachy Head took nearly a hundred dozen wheatears in one day. He caught so many that he could not find crow-quills enough to thread them upon, and was obliged to gather them in his smock-frock, and to call upon his wife to make a sack of her petticoat.

The wheatear is a beautiful little bird: his upper parts a delicate grey, the under parts white, the wings black; and as he flies before you the white patch above his restless tail catches the eye from afar.

Vipers

Providence has been so indulgent to us as to allow of but one venomous reptile of the serpent kind in these kingdoms, and that is the viper [or adder].

A neighbouring yeoman killed and opened a female viper about the 27th of May : he found her filled with a chain of eleven eggs, about the size of those of a blackbird.

Though they are oviparous [egg-producing] yet they are viviparous [bringing forth their young alive] also, hatching their young within their bodies, then bringing them forth.

Whereas snakes [grass-snakes] lay chains of eggs every summer in my melon beds, in spite of all that my people can do to prevent them ; which eggs do not hatch till the spring following, as I have often experienced.

Several intelligent folks assure me that they have seen the viper open her mouth and admit her helpless young down her throat on sudden surprises, just as the female opossum does her brood into the pouch upon the like emergencies ; and yet the London viper-catchers insist on it that no such thing ever happens.

As to the blind-worm, I have found on examination that it is perfectly innocuous.—G. W.

Adder and Grass-Snake

Most snakes lay eggs, but not the common adder, or that common English lizard, the harmless blind-worm or slow-worm—these bring forth their young alive. The grass-snake, having laid its eggs, may never see its young ones after they are hatched ; but the adder stays by her family, to protect them.

The adder is known from the grass-snake by the inky-black zigzag markings down his back, and the dark V-shaped mark on his head. He may be ash-grey or brightly coloured, yellowish or reddish, a beautiful sight to see in sunlight ; yet amid suitable surroundings all his colours and the dark zigzag line mingle harmoniously with the patches of sunlight and shadows about him.

The harmless grass-snake is a greyish green colour, and, lacking the distinct zigzag, is dotted over with black spots.

It is well to know an adder, and to be on the look-out for one when primrosing in April, or lying on the heather of commons or downs in summer-time. For it would not be pleasant to sit down on a primrose bank and accidentally lay hands on an adder ; but unless thus touched, he would not venture to harm anybody. Sheep sometimes, on the downs, are bitten on the nose when grazing and are killed by adders ; the shepherd kills adders in turn, as do nearly all people who have the chance.

The question whether adders do swallow their young when suddenly surprised and alarmed is still often debated. The young ones have a mysterious way of disappearing when disturbed, which may have led some people to think they must have been swallowed; and then the fact that wriggling young ones are found within the mother's body has strengthened this belief, and many good observers declare they have seen the act of swallowing.

In a letter dated 1776 Gilbert White describes how in the August of the previous year he surprised and killed an adder as it lay in the sun, and found on cutting it open that there were fifteen young ones within its body, the shortest measuring fully seven inches. "This little fry," he wrote, "issued into the world with the true viper spirit about them, showing great alertness; they twisted and wriggled about, and set themselves up, and gaped very wide when touched with a stick, showing manifest tokens of menace and defiance."

Adders and grass-snakes may be expected to appear in March, though the adder is about earlier in warm weather. He loves to bask on a sunny bank, or, on the hills, on such a dry sunny place such as an old stem of gorse. If you once find an adder's basking-place on a grassy bank, you may expect to see him there another day. You have to stand very still to catch an adder napping; at the least sudden movement he glides away.

Even for the adder the good word may be said that he hunts and destroys young mice. The grass-snake also is a mouse-hunter; he will take young rabbits, birds such as larks, and birds' eggs, and he is especially fond of frogs—a thrilling sight it always is to see the glistening snake gliding through the grass after its prey.

Some people possess a peculiar power over snakes, and are not afraid of handling even adders, which soon become tame and harmless—to their friends. The slow-worm is a safer pet, and interesting in his ways. He will bite when annoyed, but not sharply. He is fond of slugs, which on taking he holds for a minute or more before swallowing, head first. A slow-worm may measure fifteen inches in length. His back is silver-grey; he has a suggestion of the wicked look of the serpent—he is like a little harmless imitation adder.



Late Singers

“The titlark and yellowhammer breed late, the latter very late; and, therefore, it is no wonder that they protract their song; for I lay it down as a maxim in ornithology, that as long as there is any incubation going on, there is music. As to the red-breast and wren, it is well known to the most incurious observer that they whistle the year round, hard frost excepted.”

A Black Bullfinch

“A few years ago, I saw a cock bullfinch in a cage, which had been caught in the fields after it was come to its full colours. In about a year it began to look dingy, and blackening every succeeding year, it became coal-black at the end of four. Its chief food was hemp-seed. Such influence has food on the colour of animals! The pied and mottled colours of domesticated animals are supposed to be owing to high, various, and unusual food.”

Stone- Curlew

The history of the stone-curlew is as follows:—

It lays its eggs, usually two, never more than three, on the bare ground, without any nest, in the field, so the countryman in stirring his fallows often destroys them.

The young run immediately from the egg like partridges, etc., and are withdrawn to some flinty field by the dam, where they skulk among the stones, which are their best security; for their feathers are so exactly of the colour of our grey spotted flints, that the most exact observer, unless he catches the eye of the young bird, may be eluded.

The eggs are short and round, of a dirty white, spotted with dark bloody blotches. Though I might not be able, just when I pleased, to procure you a bird, yet I could show you them almost any day; and any evening you may hear them round the village; for they make a clamour which may be heard a mile.

“Thick-knee” is a most apt and expressive name for them, since their legs seem swollen like those of a gouty man. When the thick-knee flies, it stretches out its legs straight behind, like a heron.

On the 27th of February, 1788, stone-curlews were heard to pipe; and on March 1st, after it was dark, some were passing over the village, as might be perceived by their quick short note, which they use in their nocturnal excursions by way of watchword, that they may not stray and lose their companions.

Thus we see that, retire whithersoever they may in the winter, they return again early in the spring, and are, as it now appears, the first summer birds that come back.

They spend the day in high elevated fields and sheep-walks; but seem to descend, in the night, to streams and meadows, perhaps for water, which their upland haunts do not afford them.—G. W.

The Stone-Curlew's Story

WE can never read these words without seeing a picture of a certain flinty field in Hampshire, known to Gilbert White of old, where the rare birds, which he described so faithfully, may still be seen, and hearing again their wild whistle, as it rings out at night—for these are night as well as day birds.

When you are lucky enough to see a stone-curlew at close quarters, you find a brownish bird of mottled plumage, some eighteen inches long, the throat white, the breast streaked with brown, standing on long yellow legs. As well as "thick-knee," he is called the Norfolk plover, since he is chiefly at home in Norfolk, though a few still haunt the flinty fields of Hampshire.

Some curlew stay in the south of England for the winter, but most of them then leave us.

Cock and hen birds are the same in appearance, and the cock is a good mother to the eggs, taking his turn at sitting. Very vigilant and wary they are when nesting. The young ones squat and are motionless when they fear an intruder; and the old birds also will stretch themselves on the ground, as if knowing how effectively they match their surroundings.

These are good friends of the farmer, living on grubs, insects, and worms which live on his crops.

The Sand-Martin

The sand-martin is by much the least of any of the British swallows.

It is curious to observe with what different degrees of skill Providence has endowed birds of the same genus, so near in their general mode of life ; for, while the swallow and the house-martin discover the greatest address in raising and securely fixing crusts or shells of loam for their young, the sand-martin digs out a round and regular hole in the sand or earth, which is serpentine, horizontal, and about two feet deep. At the inner end of this burrow does this bird deposit, in a good degree of safety, her rude nest, consisting of fine grasses and feathers, usually goose feathers, very inartificially laid together.

Perseverance will accomplish anything: though at first one would be disinclined to believe that this weak bird, with her soft and tender bill and claws, should ever be able to bore the stubborn sand-bank, without entirely disabling herself. Yet with these feeble instruments have I seen a pair of them make great dispatch, and could remark how much they had scooped that day, by the fresh sand which ran down the bank, and was of a different colour from that which lay loose and bleached in the sun.

The sand-martin arrives much about the same time with the swallow, and lays, as she does, from four to six white eggs. The nestlings are supported with gnats and other small insects, and sometimes they are fed with dragon-flies almost as long as themselves.

In the last week in June we have seen a row of these sitting on a rail, near a great pool, as perchers, and so young and helpless, as easily to be taken by hand ; but whether the dams ever feed them on the wing, as swallows and house-martins do, we have never yet been able to determine ; nor do we know whether they pursue and attack birds of prey.

When they happen to breed near hedges and enclosures, they are dispossessed of their breeding-holes by the house-sparrow, which is, on the same account, a fell adversary to house-martins.

These swallows are no songsters, but rather mute, making only a little harsh noise when a person approaches their nests.

Undoubtedly they breed a second time, like the house-martin and swallow ; and withdraw about Michaelmas.

These birds have a peculiar manner of flying, flitting about with odd jerks and vacillations, not unlike the motions of a butterfly. Doubtless the flight of all swallows is influenced by, and adapted to, the peculiar sort of insects which furnish their food.

They dip and wash as they fly sometimes, like the house-martin and swallow.—G. W.

The Story of the Sand-Martins

THEY are the first of the swallows to visit us in the spring-time, these dusky little sand-martins, and the first to leave us. During their brief stay they are not seen very much, since they nest in solitary places, in cliffs and sand-pits, and haunt rivers and large lakes.

That they should tunnel holes in hard sand-banks is certainly wonderful, considering their slight appearance.

Their work is more wonderful when one observes that they do not peck with their bills, as a woodpecker drives a hole in a tree, or as a man works with a pick-axe, but diligently make the hole by taking out minute particles of sand, working with incredible speed until, particle by particle, they remove the sand, and have gone far enough with their tunnel to make the enlargement at the end for the nest-chamber.

The cock as well as the hen engages in the arduous work.

We are glad to think that when a suitable hole has been tunnelled, unless it should fall in it may be used by the industrious birds for several seasons.

The Toad

It is strange that the matter with regard to the venom of toads has not been yet settled. That they are not noxious to some animals is plain; for ducks, buzzards, owls, stone-curlews, and snakes eat them, to my knowledge, with impunity. And I well remember the time, but was not an eye-witness to the fact (though numbers of persons were), when a quack at this village ate a toad, to make the country people stare; afterwards he drank oil.

I have been informed also that some ladies (ladies, you will say, of peculiar taste) took a fancy to a toad, which they nourished summer after summer for many years, till he grew to a monstrous size, with the maggots, which turn to flesh-flies. The reptile used to come forth every evening from a hole under the garden steps; and was taken up, after supper, on the table to be fed.

But at last a tame raven, kenning him as he put forth his head, gave him such a severe stroke with his horny beak as put out one eye. After this accident, the creature languished for some time and died.—G. W.



The little husband stands in some awe of his portly spouse

Tales of the Toad

IN olden days the toad was looked upon as a venomous and loathly thing ; it was thought to spit a deadly poison, and to be the image of spite and hate. Yet it was good luck if a toad crossed the path of a wedding party. Good St. Patrick spared the toads when he drummed the snakes and other vermin out of Ireland ; and if you wore a toad you carried a charm against poisons and plagues.

In old days it would be thought very strange if any ladies made a pet of so vile and noxious a creature. But the toad is a delightful pet, and not nearly so poisonous as he was thought to be of old, though the dog that tries to worry him is soon sent packing away with a nasty taste in his mouth. Really the toad is very harmless.

We know also that the toad does a great deal of good in the world, even if he does have a little poison concealed about him.

He devours enormous quantities of insects far more

harmful than himself, and the gardener makes him a welcome guest, and is glad to have him in greenhouse or cucumber frame.

It is true the bee-keeper does not love him, and can



The dog was sent packing away with a nasty taste in his mouth

tell stories like the one of the toad who every evening would place himself in front of a bee-hive on the look-out for any weary bee which fell to the ground, as bees will. Then the toad would hop up to within two inches of the bee, and fixedly regard it with great gravity, at last flashing out his long tongue, with-

drawing it with the bee held fast by its sticky fluid, and gulping it down with great satisfaction. And then he would sit in wait for the next prize.



The toad changes his coat several times in the year—"In his new raiment"

It is most amusing to watch a toad taking a meal. Any kind of insect or slug is agreeable to him—wasp, bee, gnat, ladybird, earwig, glow-worm, grasshopper—all come alike to him. But he insists that his prey

shall prove itself to be alive by movement before he tackles it, and you see him squatting before a promising worm, his beautiful eyes glittering, the most intent look on his face, waiting for minutes for the movement which sends his tongue flashing out, to double back on itself in his mouth, the live worm on the end of it. A full-grown cockroach may give him some trouble before he can swallow it, though he will take six or seven in succession. He swallows snails with their shells, though he cannot manage very large ones. Sometimes a worm he is trying to swallow succeeds again and again in creeping out of his mouth, much to his annoyance.

When November comes the toad gives up eating altogether, to fast and sleep through the winter, not stirring again until March.

Once or twice in the year he changes his coat, which slits down the back so that he can wriggle himself out ; then by putting a hind foot between his front ones, he is able to pull out his leg from the skin, as from a stocking ; and when at last he is free of his skin, he promptly swallows it—thus gaining, at no cost, a new coat and a free meal at the same time.



The Clever, Plucky Sparrow

“House-sparrows build under eaves in the spring ; as the weather becomes hotter, they get out for coolness, and nest in plum-trees and apple-trees.

“These birds have been known sometimes to build in rooks’ nests, and sometimes in the forks of boughs under rooks’ nests.”

THE STORY OF THE RAVEN



The tame raven delights in worrying dogs and poultry and other pets of a garden

The Raven

In the centre of a grove there stood an oak, which, though shapely and tall on the whole, bulged out into a large excrescence about the middle of the stem. On this a pair of ravens had fixed their residence for such a series of years, that the oak was distinguished by the title of the Raven Tree.

Many were the attempts of the neighbouring youths to get at this eyrie: the difficulty wetted their inclinations. But when they arrived at the swelling, it jutted out so in their way, and was so far beyond their grasp, that the most daring lads were awed, and acknowledged the undertaking to be too hazardous.

So the ravens built on, nest upon nest, in perfect security, till the fatal day arrived in which the wood was to be levelled.

It was in the month of February, when those birds usually sit.

The saw was applied to the butt, the wedges were inserted into the opening, the woods echoed to the heavy blows of the beetle, or mallet, the tree nodded to its fall; but still the dam [or mother bird] sat on.

At last, when it gave way, the bird was flung from her nest; and, though her parental affection deserved a better fate, was whipped down by the twigs, which brought her dead to the ground.—G. W.

The Story of the Raven

THE beautiful story of the brave mother raven who clung to her nest, while the woodman cut down the nest-tree beneath her, shows that good words could be spoken even for the bird whose character was as black as its coat in the days when ravens were more common than now. The story does not say much for the good hearts of the men who cut down the tree.

A companion story is told of a mother squirrel. Some tall trees were being cut down in Richmond Park; on one some squirrels had built their nest, or drey, and in the drey was a happy party of young ones. Then came the woodmen, with axes, beetles, and cords; the axes began their work, with the cords the tree was swayed back and forth, and all the time the mother squirrel remained in the nest to guard her young. At last the tree fell, "and the affectionate mother," the story ends, "was killed in the fall, refusing to the last to quit her hapless offspring."

The raven in appearance is a very large rook, with a harsh, croaking voice. A noble bird he looks when he soars aloft to a great height, gliding majestically on his long pointed wings, rising and falling on a wavy line. Like the rook, he performs at times strange antics, tumbling and recovering himself. Gilbert White noticed how they would strike and cuff each other on the wing in a kind of playful skirmish, and turn on their backs with loud croaks, as if falling—

this he thought happened when they scratched with one foot, and lost balance.

Among the raven's good qualities is that of faithfulness ; he pairs for life. And when not persecuted he is faithful to one tree, returning to the same nest spring after spring. Hence in the New Forest and in other parts his favourite trees have been known through centuries as "raven trees," or "raven clumps."

He has been persecuted almost out of existence, only holding his own in such wild, rugged strongholds as the northern coast of Scotland. We have often been to visit raven-trees, and ravens' woods, and found the names printed on maps ; but alas ! the black brotherhood of the ravens has vanished, and the high old trees are tenanted now by doves and starlings.

Gamekeepers and shepherds have exterminated or banished nearly all our ravens. They were ever in the keeper's black books, though he might have given them credit for bringing home rats for their young, and rats are deadly enemies of game ; but they were shot without mercy. For they would kill any hare, pheasant, or partridge which was wounded, and were great robbers of eggs ; on the rugged cliffs where they are still found they freely plunder the gulls' nests. The farmer hated them because they took his ducks, geese, or chickens. The shepherd dreaded them because they pecked out the eyes of young weakly lambs and attacked ailing or dying ewes.

In hard weather it would be almost impossible for the raven to live an honest life ; he must become a poacher, though by nature he is rather a scavenger, preferring to feed on carrion than to attack living creatures. When he can pick up dead animal remains, his sharp bill, aided by his wonderful sense of smell and wonderful eyesight, can work to satisfy his ghoulish appetite ;

but when hungry, sitting humped up with muffled feathers, he is the picture of misery. Long frost drives him to tidal rivers and muddy creeks, where he joins other members of his tribe, carrion and hooded crows, picking up dead fish and what he may.

One old-time keeper found out that ravens, in spite of all that was said against them, were really his good friends. In his preserves—at Burton Park—a pair of ravens, seventy or eighty years ago, bred every spring, and while they were in residence they would allow no hawk, weasel, or indeed any winged or four-footed kind of vermin, to approach the wood where stood their nest-trees. Pheasants and hares abounded, but the model ravens never touched them or their young, foraging at a distance for food, chiefly the flesh of dead animals or of live rats, occasionally when hard pressed taking young rabbits from downland warrens.

Nothing can escape the hungry raven's eye, no leveret, mouse, or scrap of food. Hunting a rat, he will swoop down like a hawk, but before he comes down to feed on carrion he circles cautiously overhead to make sure there is no danger to himself. On alighting he advances slowly to his meal, his head on one side, looking about him before he begins his feast, then savagely pecking, looking round again in a startled way after each morsel. If undisturbed, he will clean his beak and preen his feathers after feeding, before mounting into the air.

The raven is one of the first birds to begin nesting. In January he visits his old haunt, and in February or March the eggs are laid—four or five eggs, rough, pear-shaped, bluish green, spotted and blotched with greenish brown. The nest is a bulky structure, perhaps two or three feet across, and a foot thick, of dry sticks and clay, small twigs, heather, or pieces of

bark within, and a lining of moss, grass, sheep's-wool, or deer's-fur. Very crafty and cautious are the parents when they have young, and if they see danger near the nest, they will circle overhead for hours at a time, while the hungry young clamour in vain for food.



When hungry, the raven is the picture of misery

In olden days ravens often were kept as pets, for the sake of their entertaining ways. They will bark and growl like dogs, learn to coo like pigeons, clack like the hen who has laid an egg, and speak a few words. But they delight in worrying dogs and cocks and other pets of a garden, and in stealing any bright thing that takes their fancy.

The Blackbird with the White Necklet

THE ousel is larger than a blackbird, and feeds on haws ; but last autumn (when there were no haws) it fed on yew-berries : in the spring it feeds on ivy-berries, which ripen only at that season, in March and April.

On the 13th of April I went to the sheep-down, where the ring-ousels have been observed to make their appearance at spring and fall, in their way, perhaps, to the north or south ; and was much pleased to see three birds about the usual spot.

It is remarkable that they make but a few days' stay in their spring visit, but rest near a fortnight at Michaelmas. These birds, from the observations of three springs and two autumns, are most punctual in their return ; and exhibit a new migration unnoticed by the writers, who supposed they never were to be seen in any of the southern counties.

It is remarkable that they are very tame, and seem to have no manner of apprehensions of danger from a person with a gun.

G. W.

RING-OUSELS—whose migrations were first recorded by Gilbert White—are very like blackbirds in their habits, and in appearance suggest blackbirds with beautiful white necklets. They arrive in spring in flocks, and may be seen for a short time in southern home counties before they pair and seek nesting-places, in a few lonely places in the south, and in the north, on mountain-sides. The nest is often on the ground, amongst heather, and is a very blackbird's—and the eggs are like a blackbird's, with larger markings. In autumn we sometimes catch a glimpse of the travellers, in such places as the South Downs, as they make their leisurely way to the south of Europe for the winter.

“The Cane”

Some intelligent country people have a notion that we have, in these parts, a species of the weasel tribe, besides the weasel, stoat, ferret, and polecat ; a little reddish beast, not much bigger than a field mouse, but much longer, which they call a *cane*.

This piece of intelligence can be little depended on ; but farther inquiry may be made.

Weasels prey on moles, as appears by their being sometimes caught in mole-traps.—G. W.

The Little Tiger of our Jungles

"CANE" was an old country name for a very small weasel. The idea of two kinds of weasels is due no doubt to the small size of the females. When Mr. and Mrs. Weasel have been shot by a gamekeeper, and strung up side by side on a bush—and how often in our woodland walks we see weasel forms dangling, stiff and stark, from keepers' gibbets!—we observe that Mrs. Weasel is scarcely half the size of her gallant mate.

The hand of every gamekeeper is against weasels, but they are not killed so easily as stoats. The weasel's habit of running through mole-runs stands him in good stead. As the keeper's gun goes up, the little hunter disappears as by magic underground, and he will dash along the mole's run for fifty or even a hundred yards. Sometimes we have come upon a weasel in a field of short grass, and have rushed at speed towards him, only to see him sink into the earth and vanish.

He is the little tiger of our English jungles : ferocious, bloodthirsty. Nature sent him to keep down the mice, and for this work she furnished him with needle-sharp teeth and a wonderful hunting nose. His cunning little head is somewhat flat, like an adder's, his body lissom and snake-like ; his ears are small, and his tail is short and sparse, very different from the stoat's

fine brush, with its black tip. What he lacks in ornament helps to make him invisible to his prey. He is the smallest of his tribe, and the least striking to the eye, but he is as ferocious as any, and more cunning or more fortunate, for though much persecuted, he has survived where the pine-marten and the polecat have been exterminated.

But he does most of his hunting out of sight, and much of it underground, through jungles of dense undergrowth, and in long grass. Often we have heard him rustling over dry leaves, but we have seen no more than a fleeting glimpse of his dashing form.

He is called sometimes by country people "mouse-hunter" and "mouse-killer." When he is left alone to do the work he is meant to do, he will quickly clear a wheat-stack of mice; his presence about a barn-yard, or ricks, or a garden, puts terror into the heart of all the tribe of mice. Creatures on which the weasel preys seem paralysed by fear when they know he is upon their trail. A mouse will sit quivering on a bush too terrified to move when the weasel looks up from below, or on the ground can only go hopping along, slowly and painfully, when a weasel is after him, as if in his dread he has lost control of his limbs.

And it is so with the rabbit which the weasel hunts. Soon he gives up in despair, and, crouching, awaits his doom. Then up canters the little weasel, whimpering on the hot scent, to make the death-spring.

If you come upon a weasel which has just killed a rabbit, you may drive him away, but though you stand by the rabbit, back he will come, again and again, to his kill. And if you defend the rabbit's body, presently you may hear the little hunter uttering a sorrowful note of disappointment. Valiant indeed is the weasel—and many stories tell how, when a man has

picked up a young weasel, its mother has dashed at him, running up his legs, and trying to reach his throat.

Over birds, as over mice and rabbits, the weasel has the same power of fascination. As if he knows his power to strike dread into hearts, he tries, so it seems, to make believe at times that he is not a weasel at all. His plan is to cut all kinds of capers, in innocent-looking and playful manner, which will attract and hold the birds in a spell of curiosity, or allow him to dance his way within striking distance. Sometimes on a lawn, where a family party of birds is parading, the weasel appears, whirling and tossing himself about, but ever working his way nearer and nearer. . . .

Or the scene is a quiet dell haunted by small birds. All of a sudden an uproar arises among them, alarm-cries break out, an excited chatter and babel. As one or two raise the cry of danger, others quickly gather to see what is amiss, adding their notes to the hubbub. "Spink! Spink! Weasel! Weasel!" cries the chaffinch, and tom-tits join in with sharp notes of hatred and fear, wrens scold, and plaintive notes come from the warblers. All this time the weasel has been crouching, eyeing the birds, and whimpering as he eyes them. Then of a sudden he begins his dance; and it is a dance of death.

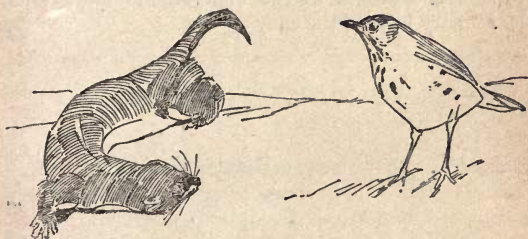
He rears himself on his hind legs; he skips into the air like a bounding lamb; you would think he had begun an innocent frolic. He cuts capers, he whirls, he tumbles; then again he crouches and he whimpers. Each time he whirls and cavorts a new hubbub louder than before rises from the birds; they seem to grow frenzied, losing their senses, amazed and overwhelmed by fatal curiosity—and at last one hapless bird pays the penalty for all.



*A mouse will sit quivering on a stump, too terrified to move
when the weasel looks up from below*

born...
synd bid at

Yet the foolish birds have little to fear for themselves from the weasel; when they spied him out he may have been hunting only a mouse. True, he takes young birds from their nests on the ground, and may take a full-grown bird when the chance comes, and he has hungry mouths to feed in a nest at home. For good reason or not, the dread of the weasel is deeply implanted in birds' breasts.



The weasel, whirling and tossing himself about, ever works his way nearer and nearer

The bold little hunter takes sometimes to water if he thinks he may reach some bird—a gull, perhaps—which he has seen floating not far away.

In his turn he may be attracted to his undoing. If you see a weasel, and can make a squeaking noise like a rabbit makes when in a snare, you may call him to you.

One of the prettiest woodland sights is to watch a party of little weasels at their play. In and out and round about a bush, or a woodstack, they run and

gambol; and through their play their mother is teaching them all the while to hunt for themselves. You may see her pick one up and carry him by the loose skin at the back of the neck: like all carnivorous creatures, she carries her young in this way, moving them if need be to a place of safety. She brings back mice for them to play with and worry. Later on she leads them out on real hunting expeditions.

So the weasel grows up a mighty hunter. He has fed on blood from the time when he lay with his brothers and sisters in the underground lair; and bloodthirsty he is to the end.



Wild Canaries

“Might not Canary birds be naturalised to this climate, provided their eggs were put in the spring into the nests of their congeners, as goldfinches, greenfinches, etc.? Before winter, perhaps, they might be hardened, and able to shift for themselves.”

The Redstart

The song of the redstart is superior, though somewhat like that of the whitethroat ; some birds have a few more notes than others. Sitting very placidly on the top of a tall tree in a village, the cock sings from morning to night ; he affects neighbourhoods, and avoids solitude, and loves to build in orchards and about houses ; with us he perches on the vane of a tall maypole.

When redstarts shake their tails, they move them horizontally, as dogs do when they fawn ; the tail of the wagtail, when in motion, bobs up and down, like that of a jaded horse.—G. W.

The Bird with the Tail of Fire

FROM his fiery red tail, the redstart is known commonly as “fire-tail” : a small bird with a white forehead, bluish grey upper parts, black throat, and rich chestnut tail, which catches the eye as he flirts it about when you see him in his favourite haunt—some old wall, or a quiet orchard, or a peaceful and deserted ruin. The nest is often in a hole in a wall ; some sort of covering the redstart must have. The blue eggs are almost like hedge-sparrow’s.

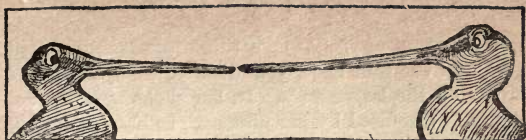
It is very charming to watch the movements of the redtail among blossom-laden orchard trees ; and as the redstart does useful work in destroying insects and caterpillars, he should always be a welcome visitor, when, as Gilbert White says, “he affects neighbourhoods.”



Snipe are found in wet, marshy situations—what a beak for a cold

Snipe

Numbers of snipes breed every summer in some moory ground on the verge of this parish. It is very amusing to see the cock bird on wing at that time, and to hear his piping and humming notes. They always hum as they are descending.—G. W.



Master Bleater

WALKING over marshy ground in April, you perhaps put up some snipe, who go away on wonderfully swift, zigzag courses, uttering their alarm-notes—"scape-scape."

It is very fascinating in April to lie in wait to watch snipe to their nests ; and then to work over the marshy ground they haunt, or round about some great pond, in the hope of a reward in the rare and charming sight of their eggs. A lark's nest may be found at the same time ; duck, moorhens, coot, and other water-birds may be seen and heard ; and overhead float and toss the wailing peewits, their minds also set on nesting.

Aloft, through April evenings, you see the snipe performing the strange exercises they practise in nesting-days, rising to great heights, then shooting down, on violently beating wings, and making the most curious, mysterious noise, drumming, or bleating, produced by certain feathers.

Before you put up the snipe, he crouched low to the ground, the mottled brown feathers matching well the withered grasses and the rushes of marshy, fenny ground where he hides ; wandering along, you may suddenly be startled at finding snipe rising all about you.

In a clump of rushes or a tuft of coarse grass, you may find the four eggs, yellowish white, spotted with brown on the larger ends. In her slight nest the hen sits, well disguised by her plumage, to hatch the eggs, while her mate sports in the air through the day.

The little sharp-flying Jack Snipe is a winter visitor—a more solitary bird, and smaller, than the common snipe. But he puts on his courting raiment, his brown and black mottled feathers becoming bright and shining, before he leaves us in April to make his nest far in the north of Europe, in Arctic regions.



Jack Snipe, dressed in his best, leaving us for foreign parts.

The Melodious Tribe of Warblers

The Nightingale

Nightingales not only never reach Northumberland and Scotland, but also, as I have been always told, Devonshire and Cornwall. In those two last counties, we cannot attribute the failure of them to the want of warmth: the defect in the west is rather a presumptive argument that these birds come over to us from the continent at the narrowest passage, and do not stroll so far westward.

Nightingales, when their young first come abroad, and are helpless, make a plaintive and a jarring noise; and also a snapping or cracking, pursuing people along the hedges as they walk: these last sounds seem intended for menace and defiance.—G. W.



Grasshopper Warbler

Nightingale

Blackcap

The Master Singer

THE Spaniards have a word for the nightingale, "Ruisñor," signifying king and master—the master singer of the whole world of birds, whose song, they say, embodies thoughts and feelings, joy and pain, longing and love, in all their inmost depths. Many have puzzled over our name, nightingale; night is clear, but "ingale" difficult, until one learns it comes from the Saxon word "galan," to sing. The matchless song begins at about half-past three in the morning, or four, but may be heard at all hours of the night, especially in moonlight, as by day, and the king and master of singers may be set singing by music, whistling, or less melodious noises.

In mid-April the nightingales come, to sing until the middle of June. They still seldom travel far to the north or west of our isles, returning year after year to their favoured haunts in the southern counties.

The nightingale is recognised at once by the chestnut-brown of his upper parts; the chin and throat are greyish white, the breast is a light greyish brown. The nest is on the ground, or in a low bush, of dried grasses, leaves, and roots; the beautiful eggs are of dull olive hue.

To set down the nightingale's song in words which can express the purity and brilliance of the notes is an impossible task which many have attempted: a German version is the most ingenious, and though it reads like gibberish, does recall to those who know well the nightingale's voice some of his passages. The prelude to the song is often three or four long-drawn, passionate whistles; these are expressed by the words—

Tiuu tiuu tiuu tiuu.

Then the song bursts out :

Spe tiu squa,
Tio, tio tio tio tio tio tio tio tix,
Qutio qutio qutio qutio,
Zquo zquo zquo zquo,
Tzu tzu tzu tzu tzu tzu tzu tzu tzi,
Quorror tiu squa pipiquisi,
Zozozozozozozozozozozo zirrhadng!

And so it goes on, to three times this length: "Lu lu lu ly ly ly li li li li," and, "qi qi qi jo jo jo jojojo qi," and "Higai gai gai gai gai gai giagiagiagia," one long, gurgling passage being represented by the extraordinary-looking line:

Hezezezezezezezezezezezezezezezeze quarrhozehei.

**Willow-
Wren and
Chiff-
chaff**

No two birds can differ more in their notes, and that constantly, than those two, that I am acquainted with : for the one has a joyous, easy, laughing note, the other a harsh loud chirp. The former is every way larger, and three-quarters of an inch longer, and weighs two drachms and a half, while the latter weighs but two ; so that the songster is one-fifth heavier than the chirper.

I once saw notable sagacity in a willow-wren, which had built in a bank in my fields. This bird a friend and myself had observed as she sat in her nest, but were particularly careful not to disturb her, though we saw she eyed us with some degree of jealousy. Some days after, as we passed that way, we were desirous of remarking how this brood went on ; but no nest could be found, till I happened to take up a large bundle of long green moss, as it were carelessly thrown over the nest, in order to dodge the eye of any impertinent intruder.

The chirper [or chiff-chaff] (being the first summer bird of passage that is heard, the wryneck sometimes excepted) begins his notes in the middle of March, and continues them through the spring and summer, till the end of August. It utters two sharp piercing notes, so loud in hollow woods as to occasion an echo.—G. W.

The Laughing Willow-Wren and the Chirping Chiff-chaff

WE never go into our garden in summer, across the fields and into the woods, without hearing the sweet, delicate little song of the willow-wrens. We hear them the whole day through, singing in the tree-tops on every side ; and each summer we find a number of their beautiful little domed nests, cunningly concealed on the ground. Yet it is strange how few people in the country pay heed to the willow-wren's anthems.

They are elegant, yellowish-green birds, some five inches in length, seen in gardens, meadows, and woods, and fond of stream-sides, but though called the wrens of the willows, are as fond of other trees. The old name, " hay-bird," suited them better, perhaps, as where there are hayfields there are willow-wrens. They are so abundant in some seasons in their favourite haunts as to seem almost the most abundant of all summer visitors.

Early in April the willow-wrens arrive from overseas. You may never mistake their song if you remember that it is a cadence, short and very sweet, running down the scale, the first notes prolonged, the remainder gradually becoming shorter as they fall. The note is spelt " twee," repeated ten times or more. They are like little chime-ringers, ringing eternal

chimes, which drop down to pianissimo, and are always in harmony. Each chime is about three seconds long, and is repeated at eight-second intervals, hour after hour through May and June days.

The nest is like a little feather-lined pocket of grass on the ground, domed over, often with moss, wherein are laid six or seven white pink-spotted eggs, very frail.

While the chiff-chaff is a near cousin of the willow-wren, the same kind of little yellowish-green bird, a haunter of tree-tops, he has the simplest song of all the warblers—two notes, uttered in a very spirited way, repeated several times without a pause, and ringing out something like the chime of a distant bell. He sings his own name, “chiff-chaff,” with the accent on the chaff. Sometimes it sounds like “chiff-chaff, chivy-chavy, chiff-chaff,” as the little bird goes working all over trees and bushes, seeking out caterpillars, greenfly, flies, moths, and other insects. They are always welcome, these notes, especially when first heard, telling a tale of spring.

The nest is like the willow-wren's in that it is on the ground, grassy and mossy, warmly lined with feathers—partridge feathers are favourites with these birds. Six or seven frail eggs are laid, white, with small spots and dots, greyish red or purplish brown, darker and more distinct than those on the willow-wren's, and often clustered at the thicker end. We sometimes find the nest in clumps of bracken, about two feet from the ground, a very difficult nest to discover, unless the anxious little sitting bird tells of her secret by fluttering away.

In Gilbert White's day these birds seem to have been little known. The willow-wren he called, “the smallest willow-wren,” the chiff-chaff “the chirper”; and as he did not identify them with the Latin names

they had earned, he called these two and also the wood-wren, indifferently, *Motacilla trochilus*, or "a kind of willow wren." And, strange to say, he makes no note of the differences in their eggs and nests. And from one note, where he speaks of willow-wrens as "horrid pests in a garden, destroying the pease, cherries, currants, etc.," it seems clear that he mistook them for another member of the tribe of warblers, the garden-warbler: for willow-wrens would not touch fruit, and garden-warblers late in summer take currants and other fruits.

Garden-warblers are not mentioned in the "History of Selborne": those little shy brownish birds, that sing almost as well as blackcaps, in the same bright, pure strains, but less carefully and more hurriedly: seeing the bird, we know it to be no blackcap, as it lacks the male blackcap's black cap, and the female's reddish brown on the head. The sweet, swift warbling comes pouring from the bushes the bird frequents for hours on end. The nest we have usually found in brier bushes, and when they haunt gardens they may build in gooseberry bushes, or in some thick hedge. The eggs are beautifully blotched over with brown and greyish tones. "Prettichaps" was a quaint old name for the bird, still sometimes heard. This is not a common bird, but we have heard his voice often near Selborne.

The whitethroat and lesser whitethroat, the black-cap, and the garden-warbler make up the genus *Sylvia* (with rare visitors, the orphean warbler, and the barred warbler, from southern Europe).

In the large and musical family which includes these warblers and the nightingale, the robin redbreast and the quiet little hedge-sparrow find a place—which perhaps might rather surprise them if they knew it!

The Grass- hopper Warbler

Nothing can be more amusing than the whisper of this little bird, which seems to be close by, though at an hundred yards' distance ; and, when close at your ear, is scarce any louder than when a great way off. Had I not been a little acquainted with insects, and known that the grasshopper kind is not yet [in April] hatched, I should have hardly believed but that it had been a grasshopper whispering in the bushes.

The country people laugh when you tell them that it is the note of a bird.

It is a most artful creature, skulking in the thickest part of a bush, and will sing at a yard distance, provided it be concealed. I was obliged to get a person to go on the other side of the hedge where it haunted ; and then it would run, creeping like a mouse before us for a hundred yards together, through the bottom of the thorns ; yet it would not come into fair sight.

But in a morning early, and when undisturbed, it sings on the top of a twig, gaping and shivering with its wings.

It chirps all night in the height of summer.—G. W.

The Bird that Mimics the Grasshopper

THIS shy, restless bird, often heard through the day and night on commons in summer, but seldom seen, is a mouse-like little creature, dusky olive-brown, mottled in effect, above, with pale yellowish-brown throat and breast. It comes to us in primrose days and leaves with the first touch of autumn.

The voice of this curious bird mimics an insect, and is well likened to the running out of a fisherman's reel. Faint at first, the curious sound grows louder, the whirring ceasing when the bird has the least suspicion of an intruder.

The nest to which the little bird creeps may be in a tuft of grass, and is built of grass, and cup-shaped. There are from five to seven eggs, whitish, spotted all over with specks of reddish brown.

The grasshopper warbler is almost alone among birds in making a little run to its nest. Sometimes it will run out of its retreat along a branch until it reaches the end, there sing its whirring song, and then, like a concert-singer leaving the platform, silently run back to hiding. It seems that its aim in life is to be as puzzling and deceptive as possible.

The Blackcap

The note of the blackcap has such a wild sweetness that it always brings to my mind those lines in a song in "As You Like It":—

And tune his merry note
Unto the wild bird's throat.

The blackcap has, in common, a full, sweet, deep, loud and wild pipe; yet that strain is of short continuance, and his motions are desultory; but, when that bird sits calmly and engages in song in earnest, he pours forth very sweet, but inward melody, and expresses great variety of soft and gentle modulations, superior, perhaps, to those of any of our warblers, the nightingale excepted.

Blackcaps mostly haunt orchards and gardens: while they warble, their throats are wonderfully distended.

In April, in the first fine weather, they come trooping all at once in these parts, but are never seen in the winter.—G. W.

The Blackcap's Roundelay

ON first arriving in April the blackcap—a greyish little songster with a black crown—practises its song in an undertone, “an inward melody,” hiding itself from sight; but though a very shy bird, retiring to the depths of bushes, one may draw close to listen to its wood-wild notes. In a short time the full song is perfected, and often is heard from apple trees, between the little singer’s meals off grubs and insects. Besides these, he is fond of raspberries and soft fruits. In his varied roundelay one seems to hear the notes of many birds—nightingale, thrush, and blackbird.

We have usually found the blackcap’s nest in bramble-bushes, a very slight nest made of grass and small roots: not one to be pried into too closely, as the builders soon desert. Their eggs vary very much in their shade of pale red, and in their dusky spots.

The Wood- Wren

A little yellow bird still continues to make a sibilous shivering noise in the tops of tall woods.

This last haunts only the tops of trees in high beechen woods, and makes a sibilous grasshopper-like noise now and then, at short intervals, shivering a little with its wings when it sings.—G. W.

The Trilling Wood-Wren

GILBERT WHITE was the first naturalist to distinguish this "little yellow bird," though he did not know its name. Few ever recognise the bird, or its "shivering noise," even nowadays, and it is a rare discovery to happen upon its nest; we doubt if Gilbert White ever saw the nest and eggs.

The wood-wren comes later than the chiff-chaff and willow-wren, staying until September. It often sings on the wing, and its short song-flights from tree to tree are most fascinating to watch. The tremulous notes are well rendered as "tzit, tzit, tzit, tzit, tzitr," turning into "tr-tr-tr-tr-tre." The first passage may begin just before the singer launches himself from a twig, and then, as he flutters on trembling wings, the change comes, and as the fairy-like form is about to alight, the tremulous notes quicken and grow louder, until the short voyage brings him to his anchorage. There is also a mournful call, sounding like "twee-it."

The nest is much like a chiff-chaff's or a willow-wren's, but is known instantly from either by the absence of feathers.



In the blackcap's varied roundelay one seems to hear the notes of many birds—nightingale, thrush, and blackbird

The Sedge- Warbler

Of the sedge-bird, be pleased to say, it sings most part of the night ; its notes are hurrying, but not unpleasing, and imitative of several birds, as the sparrow, swallow, skylark.

When it happens to be silent in the night, by throwing a stone or clod into the bushes where it sits, you immediately set it a-singing, or, in other words, though it slumbers sometimes, yet, as soon as it is awakened, it reassumes its song.—G. W.

The Mimic of the Sedges

Down by the old mill-stream, in sunlight and in soft moonlight, the sedge-warbler pours out for us every summer his chattering, scolding medley of a song. It is enough to set him singing if a boat drifts by his reedy haunt.

And he will sing as often and as long as you please. Always restless and in a hurry, he sings as he pursues his food. You see him at one moment, a slim, greyish-brown bird, with white throat, pale buff under-parts, very distinct eye-streaks, and a curiously rounded tail ; next moment he is gone, for he delights in playing at hide-and-seek.

His nest is near to the ground, as a rule, though we have found it high in a willow bush : deep and compact, of grasses or reeds and moss, lined with hair or down. The eggs are a pale brownish hue, freckled over with light brown and dull grey, a few fine hair-streaks among them.

Sedge-birds arrive in April, and stay a long time—till October.

The White- throat

The note of the whitethroat, which is continually repeated, and often attended with odd gesticulations on the wing, is harsh and displeasing. These birds seem of pugnacious disposition ; for they sing with

an erected crest, and attitudes of rivalry and defiance ; are shy and wild in breeding-time, avoiding neighbourhoods, and haunting lonely lanes and commons ; but in July and August they bring their broods into gardens and orchards, and make great havoc among the summer fruits.—G. W.

Peggy Whitethroat

WHEN April comes, comes Peggy Whitethroat, to chatter and scold from the hedge-tops—a graceful little warbler, reddish brown in hue above, with a grey head and a very white throat, by which it is known at once. Another old country name for this bird is Nettle-creeper, from its fondness of creeping about in nettle-beds after caterpillars, and there building its nest.

The harsh, scolding note is uttered as the bird flits restlessly about ; then presently is heard the peculiar whitethroat song from a twig at the top of the hedge, a rush of hurried, excited notes. Now and then the singer shoots up into the air, singing as he mounts a little way in circles.

When you go near the nest, the cock bird flits fearlessly about you, raising his crest, and harshly scolding. The nest is slight, rather deep, of fine grass, lined with horsehair, and placed low in bushes or brambles. The eggs are greenish white, brown and grey blotched.

This restless little bird has an equally restless cousin, the lesser whitethroat. There is really little difference between them in size and appearance, the lesser being only about half an inch shorter—he measures some five inches. But he is much less common, and much less of a singer.

Bats

I was much entertained last summer with a tame bat, which would take flies out of a person's hand. If you gave it anything to eat, it brought its wings round before the mouth, hovering and hiding its head in the manner of birds of prey when they feed.

The adroitness it showed in sheering off the wings of the flies, which were always rejected, was worthy of observation, and pleased me much.

Insects seemed to be most acceptable, though it did not refuse raw flesh when offered: so that the notion, that bats go down chimneys and gnaw men's bacon, seems no improbable story.

While I amused myself with this wonderful quadruped, I saw it several times confute the vulgar opinion that bats, when down on a flat surface, cannot get on the wing again, by rising with great ease from the floor. It ran, I observed, with more dispatch than I was aware of; but in a most ridiculous and grotesque manner.

Bats drink on the wing, like swallows, by sipping the surface as they play over pools and streams. They love to frequent waters, not only for the sake of drinking, but on account of insects, which are found over them in the greatest plenty.

As I was going some years ago, pretty late, in a boat from Richmond to Sunbury, on a warm summer's evening, I think I saw myriads of bats between the two places; the air swarmed with them all along the Thames, so that hundreds were in sight at a time.

The large bat retires or migrates very early in the summer: it also ranges very high for its food.

The summer through, I have seen but two of that large species.

In the extent of their wings, they measured fourteen inches and a half, and four inches and a half from the nose to the tip of the tail. Nothing could be more sleek and soft than their fur, which was of a bright chestnut colour.—G. W.

The Ways of Bats

THE note quoted about the large bat is especially interesting to us, since it was one of the first notes made about this curious creature, commonly called "noctule," and to Gilbert White belongs the honour of its discovery.

The different species of bats number more than one hundred, some being insect-eaters, some fruit-eaters ; and about a dozen species, all insectivorous, and all small members of their families, inhabit this country.

The large noctule is a most useful creature, and devours cockchafers and beetles ; he is sometimes heard uttering a shrill note.

Bats are grotesque creatures, and it is small wonder that the ancients looked upon them as harpies, part beast and part bird—fearsome things, working mischief wherever they went.

But our little long-eared bat is not without beauty, its wonder and charm lying in its ears, which are extraordinarily long, ever on the alert when it is awake, and gracefully folded when asleep ; within the large ears are what seem to be smaller ears, or inner lobes. The body is only three or four inches in length, but the wings spread out to twelve inches or more.

On the wing this bat utters a shrill, short squeak, so high-pitched that some people cannot hear the sound.

The commonest of all our bats is the pipistrelle, which haunts old houses and barns, and often comes to churches, and may be seen during the services. It

is more given to flying by day than the other bats, and we have seen it flying at noon, in bright sunshine, in the middle of winter. In cold winters this bat will sleep for three months on end (other kinds sleep even longer). It is like a little winged mouse in appearance and size, with mouse-like fur on its body. Country people still call the pipistrelle by its old English name, Flittermouse.

The scientific name for bats is "Chiroptera," from two Greek words meaning hand and wing—and bats are hand-winged creatures, forming, in the animal kingdom, a group of their own among the mammals. The leathery skin covering arms and hands, and extending to the legs, forms wings, which allow bats to fly strongly and with marvellous quickness, so that the eye can hardly follow their twistings and turnings. The bones of the hand, covered by the skin, are drawn out to a great length, and only the short thumb, which is furnished with a strong claw, is left uncovered.

Sometimes we have taken baby bats in hand—tiny, naked animals, weird to behold, seeming very helpless, but able from birth to cling to their mothers by their claws.

Some people still suppose that bats are blind, but they have sharp enough eyes, though they may be hidden by fur. No animal has a more wonderful sense of touch, a sense so acute that even if a bat were blind the sensitive nerves of its nose or wings probably would give it timely warning before it collided with any unseen obstacle in its way.

By day and through the winter bats lurk in such dark places as the roofs of barns, and, hanging by their claws, head downwards, enfold themselves in their wings to sleep. The long winter sleep is a stupor, almost the same as death.

The Part- ridge

A hen partridge came out of a ditch, and ran along shivering with her wings, and crying out as if wounded and unable to get from us. While the dam acted this distress, the boy who attended me saw her brood, that was small and unable to fly, run for shelter into an old fox-earth under the bank. So wonderful a power is instinct.
—G. W.

Pretending to be Wounded

WE all know how a lapwing will pretend to be wounded in order to divert the attention of any man, dog, or other enemy from her eggs or young; but few, like Mr. White, ever saw a hen partridge playing the same pathetic trick.

An old-time naturalist, reading this interesting note, told how he saw the same charming incident.

When his dog ran among a brood of very small partridges, the old bird cried, fluttered, and ran and tumbled along as if wounded just before the dog's nose, till she had lured him well away, when she took wing, and flew still farther off—but not out of the field.

The dog then returned to his master, near the place where the young ones lay concealed in the grass. On this, the old bird again flew back, to settle just before the dog's nose, and, by rolling and tumbling about, managed again to draw off his attention from her little ones, and so preserved her brood a second time.

The Cuckoo

When I came to recollect and inquire, I could not find that any cuckoo [as a young bird] had ever been seen in these parts, except in the nest of the wagtail, the hedge-sparrow, the titlark, the whitethroat and the redbreast, all soft-billed insectivorous birds. It appears hardly possible that a soft-billed bird should subsist [while a nestling] on the same food with the hard-billed.

This proceeding of the cuckoo, of dropping its eggs as it were by chance, is such a monstrous outrage on maternal affection, that had it only been related of a bird in the Brazils or Peru, it would never have merited our belief. But yet, should it farther appear that this simple bird may discern what species are suitable nursing mothers for its disregarded eggs and young, and may deposit them only under their care, this would be adding wonder to wonder. What was said by a very ancient and sublime writer concerning the defect of natural affection in the ostrich, may be well applied to the bird we are talking of:—"She is hardened against her young, as though they were not hers."

A countryman told me he had found a young fern-owl in the nest of a small bird on the ground: and that it was fed by the little bird. I went to see this extraordinary phenomenon, and found that it was a young cuckoo hatched in the nest of a titlark; it was become vastly too big for its nest, and was very fierce and pugnacious, pursuing my finger, as I teased it, for many feet from the nest, and sparring and buffeting with its wings like a game-cock. The dupe of a dam [or foster-parent] appeared at a distance, hovering about with meat in its mouth, and expressing the greatest solicitude.

In July, I saw several cuckoos skimming over a large pond; and found, after some observation, that they were feeding on dragon-flies, some of which they caught as they settled on the weeds, and some as they were on the wing.—G. W.



The cuckoo selects a nest of the garden warbler for her egg—

The Vagrant Cuckoo

WE all know the story of the cuckoo—how it comes in April “to tell its name to all the hills”; how the female lays an egg and drops it into some little bird’s nest, like a whitethroat’s; how the cuckoo’s egg then nearly matches the whitethroat’s; how in due time the young cuckoo is hatched, and, when strong enough, scoops up into the hollow of its back any other nestlings, or eggs, and throws them out; how it then grows and grows until it fills the whole nest, so that the poor deluded foster-parents must work themselves nearly to death to satisfy its monstrous appetite.

Those who take a cuckoo’s egg from a nest rob themselves of the chance of witnessing all those events, and reading again for themselves that strange story.

In appearance, the cuckoo looks something like a bluish hawk, with a barred breast and a very long tail. This is a bird of mystery still; and anyone who comes

upon a cuckoo's egg has the opportunity of finding out new points in its story.

One debatable question about cuckoos is, How many eggs do they lay in a season? Five may be about the right answer. And why do other birds mob cuckoos?



—and leaves it to its foster-parents to hatch and bring up—

We have seen even a gentle turtle-dove angrily pursuing a cuckoo, though neither could have had anything to fear from the other.

As well as the cry, "cuckoo," there comes from cuckoo throats a long-drawn, melodious call, something like a green woodpecker's, with a sound as of gurgling water in it; it is as if the bird were trying to call cuckoo while carrying an egg in its beak.

It is a charming sight to see a young cuckoo being fed by its foster-parents, and a most amusing one: when a little whitethroat or pipit is pushing food down the cavernous mouth of a young cuckoo it almost looks as if it might be swallowed up also. Often the foster-bird settles on the cuckoo's back while feeding it: or will hover before its mouth, and pass it food while on the wing. Birds blessed—or cursed—with a young cuckoo to feed grow very bold, and may be approached closely.

The full-grown cuckoos depart, for Tropical and South Africa, towards the end of July and early in August, leaving the young birds to follow as best they may to their winter quarters; though possibly the young hatched early in the spring may go with the old birds. In the second week of April we expect to hear again their ever-welcome notes.



—which appears to be rather a hazardous undertaking at times.

Unusual Birds

The most unusual birds I ever observed in these parts were a pair of hoopoes, which came in the summer, and frequented an ornamental piece of ground, which joins to my garden, for some weeks.

They used to march about in a stately manner, feeding in the walks many times in the day ; and seemed disposed to breed in my outlet ; but were frightened and persecuted by idle boys, who would never let them be at rest.—G. W.

The Hoopoe

ONLY once have we ever seen a hoopoe in England ; and a strange and startling sight it was, for this is an extraordinary bird in appearance and habits. About eleven inches in length, he wears a brilliant dress of buff and black-and-white ; his back and tail are black, with showy bars of white and yellow, and on his head he flaunts a large, beautiful crest, tipped with black. He has a long curved bill, some two inches in length, with which he spears insects.

While you might see a hoopoe any day in the summer in a southern or eastern county, and would instantly recognise it by its great crest and variegated hues, very few of these birds now come to us from Southern Europe, where they are common. Those that came in the past were cruelly persecuted, not only by idle boys, but especially by collectors. Had it not been thought the proper course to shoot every rare visitor, the hoopoe might have become a regular British bird ; and even now, if encouraged, might nest in our land.

The curious name comes from the bird's curious call-note, sounding just like "houp, houp." He has one or two other notes, expressing anger or alarm, but "houp, houp" is the regular cry, until after nesting days, when he grows silent.

He seems a proud bird, and well aware of his peculiar charms, for ever raising and lowering his crest as if to show off, and making all manner of odd movements. Thus one bird will bow and nod to another, after the way of a turtle-dove.

Those who have been able to study the hoopoe in his favourite haunts tell us that when frightened, as by a hawk, he throws himself flat on the ground, outspreading his wings, when he looks more like a collection of coloured rags than a bird. A very curious sight it must be to see a family party of five or six birds all performing this odd deceptive trick at the same moment when suddenly startled; until the time comes for a dash to the nearest cover, whence will ring out triumphantly a loud "houp, houp."

Another trick of the hoopoe is to throw its prey into the air, to catch it again in the long bill before swallowing. He is fond of beetles especially, and for these haunts fields where cattle have grazed.

The nest is in a hole in an old tree. In the East, where the bird is not afraid of man, the nest may be in a house in the middle of a village. The tameness of the bird has been his undoing in our country.



"I once knew a tame redbreast in a cage that always sang as long as candles were in the room."

Brown Owls

When brown owls hoot, their throats swell as big as an hen's egg.

When owls fly, they stretch out their legs behind them, as a balance to their large heavy heads ; for, as most nocturnal birds have large eyes and ears, they must have large heads to contain them. Large eyes, I presume, are necessary to collect every ray of light, and large concave ears to command the smallest degree of sound or noise.

Having some acquaintance with a tame brown owl, I find that it casts up the fur of mice and the feathers of birds in pellets, after the manner of hawks ; when full, like a dog, it hides what it cannot eat.

The young of the barn-owl are not easily raised, as they want a constant supply of fresh mice ; whereas the young of the brown owl will eat indiscriminately all that is brought : snails, rats, kittens, puppies, magpies, and any kind of carrion or offal.

A neighbour of mine, who is said to have a nice ear, remarks that the owls about this village hoot in three different keys, in G flat or F sharp, in B flat and A flat. He heard two hooting to each other, the one in A flat and the other in B flat.—G. W.



"Too-whit! Too-who!"

The Hooting Brown Owl

THE white or barn owl screeches, but the brown or wood owl hoots in trumpet tones—"too-whit, too-who," he calls through the evenings and nights, or "hoo-hoo, whoo-it," or, as some like to think, he asks the question, "who, who?"—and these hooting notes are always well imitated by boys in villages round about which the brown owls live and move. From the brown owl's mate comes an answering cry, "Kee-wick."

He is the largest of our owls, preferring to live in deep, quiet woods. The nest is in a hollow tree, and there will be three or four white, nearly round eggs.

He preys on mice, rats, and young rabbits, and also takes birds—and because of this has been terribly persecuted by gamekeepers.

Mother's Love

The more I reflect on the natural affection of animals, the more I am astonished at its effects.

Nor is the violence of its affection more wonderful than the shortness of its duration.

This affection sublimates the passions, quickens the invention, and sharpens the sagacity of the brute creation.

Thus an hen, just become a mother, is no longer that placid bird she used to be ; but, with feathers standing on end, wings hovering, and clucking note, she runs about like one possessed.

Dams will throw themselves in the way of the greatest danger in order to avert it from their progeny.

Thus a partridge will tumble along before a sportsman in order to draw away the dogs from her helpless covey.

In the time of nesting, the most feeble birds will assault the most rapacious. All the swallows of a village are up in arms at the sight of an hawk, whom they will persecute till he leaves that district.

A very exact observer has often remarked, that a pair of ravens, nesting in the rock of Gibraltar, would suffer no vulture or eagle to rest near their station, but would drive them from the hill with an amazing fury ; even the blue-thrush, at the season of breeding, would dart out from the clefts of the rocks to chase away the kestrel or the sparrow-hawk.

If you stand near the nest of a bird that has young, she will not be induced to betray them by an inadvertent fondness, but will wait about at a distance, with meat in her mouth, for an hour together.

G. W.

The Love of Birds for their Young

THE love of birds for their young differs greatly from human love.

It is a passing love. The robin, when his young are fledged, drives them from the garden he haunts, to fight their own battles. And the birds do not mourn for their young, it seems. When a cuckoo's egg is hatched in a whitethroat's nest, the young cuckoo, growing up, soon throws out any young whitethroats there may be, so that they hang helpless on a bush below the nest, or lie dying on the ground. The mother whitethroat, returning, seems to pay them no heed, but goes on feeding the cuckoo as if nothing had happened ; though she must see the sad plight of her offspring with each visit to the nest.

Yet it is always beautiful and touching to see how parent birds defend their young, and to watch their pathetic wiles to lead you from their secret. The wryneck, or snake-bird, hisses like a snake to frighten you away from her chicks in the tree-hole. The lap-wing plays the old, old trick of pretending to be wounded, hoping that you will follow when she leads you, fluttering, lapping a wing as if broken, from her young. So the mother wild-duck pretends to be lame, goes shuffling along, and even lies down as if dead, acting so well that you think she really must be hurt—

until you catch sight of a little party of her ducklings, from whom she was trying to tempt you away.

Gilbert White tells the most charming story of the affection of a pair of flycatchers for their nestlings. These birds built every year in the vines growing on his house at Selborne. Once they placed their nest on a naked bough ; but a hot sunny season came on before the brood was half fledged, and then the reflection of the sun from the wall was so great that it must have destroyed the young birds if it had not been for the action taken by the parents.

All through the hotter hours they hovered over the nest, while, "with wings expanded, and mouths gaping for breath, they screened off the heat from their suffering offspring."

The wings would act, not only as sunshades, but as fans.



When the Swallows Come

"With us—[at Selborne, Hampshire]—the swallow was first seen on April the 4th ; the swift on April the 24th ; the bank-martin on April the 12th ; and the house-martin not till April the 30th."

THE HABITS OF HEDGEHOGS



Hedgehogs bear something of a resemblance to gipsy hags sitting round the cauldron

The Hedgehog

Hedgehogs abound in my gardens and fields.

The manner in which they eat the roots of the plantain in my grass-walks is very curious. With their upper mandible [or jaw], which is much longer than their lower, they bore under the plant, and so eat the root off upwards, leaving the tuft of leaves untouched. In this respect they are serviceable, as they destroy a very troublesome weed; but they deface the walks in some measure by digging little round holes.

It appears that beetles are no inconsiderable part of their food.

In June last, I procured a litter of four or five young hedgehogs, which appeared to be about five or six days old; they, I find, like puppies, are born blind, and could not see when they came to my hands.

No doubt their spines are soft and flexible at the time of their birth, but it is plain that they soon harden; or these little pigs had such stiff prickles on their backs and sides as would easily have fetched blood, had they not been handled with caution.

Their spines are quite white at this age; and they have little hanging ears, which I do not remember to be discernible in the old ones.

They can, in part, at this age draw their skin down over their faces; but are not able to contract themselves into a ball as they do, for the sake of defence, when full grown. The reason, I suppose, is, because the curious muscle, that enables the creature to roll itself up in a ball, was not then arrived at its full tone and firmness.

Hedgehogs make a deep and warm retreat with leaves and moss, in which they conceal themselves for the winter: but I never could find that they stored in any winter provision, as some quadrupeds certainly do.—G. W.

Ways that are Dark

THE hedgehog is a night-prowler.

By day he keeps himself well out of sight, curled up in thick grass, among fallen leaves in some dense old hedge, or in the roots of an old tree. Of a summer evening you may chance to hear him as he goes rustling with shuffling gait up a dry ditch in search of beetles.

At night he is fond of wandering about meadows where cattle have been grazing ; in a favourite meadow several may feed together.

But we see very little of our curious porcupine.

He leads a useful life, devouring quantities of beetles, toads, worms, and slugs. He will eat nearly anything. No doubt, if he has the chance, he takes eggs from nests. And sometimes he is in trouble with the game-keeper through making his way into a coop where a motherly hen is in charge of young pheasants. Then he may kill the hen—and in turn is likely to be killed by the keeper, who is his greatest enemy. He routs about among roots in the way of a pig, and may cause some damage in a garden.

Mother hedgehog makes for her young a sheltered nest amid leaves. Very helpless they are at first, blind and naked, their tender spines looking like white hairs. But in a week or two these harden, and the

quaint little hedge-pigs begin to move and play. The mother guards them well, and diligently brings them in worms and beetles.

Young hedgehogs easily are reared on a diet of bread and milk, and learn to know those who feed them, coming for their meals. While they are interesting little creatures to watch in a garden, they are much given to wandering. They will do good work in a house by eating cockroaches.

When curled up into a round ball of spines the hedgehog has little to fear from any natural enemy like the fox, and usually the dog that tries to make him uncurl only hurts himself. But clever dogs, trained to tackle hedgehogs by a keeper who wishes to clear them from his hedges, know how to attack them at the one weak spot, where the head is tucked in.

When in autumn the hedgehog falls into the deep, long sleep of winter, he is living on his reserve supply of fat, and his life then is at a very low ebb—the breathing slow, the heart scarcely beating. He sleeps amid leaves in a ditch, or in a hedge-bank hole or beneath an old tree's roots, never stirring from autumn to spring.



Widowed Sparrows

"When the house-sparrows deprive my martins of their nests, as soon as I cause one to be shot, the other, be it cock or hen, presently procures a mate, and so for several times following."



A long vigil—waiting for the house to open

Chaf- finches

For many years past, I have observed, that towards Christmas vast flocks of chaffinches have appeared in the fields—many more, I used to think, than could be hatched in any one neighbourhood.

But, when I came to observe them more narrowly, I was amazed to find that they seemed to me to be almost all hens. I communicated my suspicions to some intelligent neighbours, who, after taking pains about the matter, declared that they also thought them mostly all females; at least fifty to one. This extraordinary occurrence brought to my mind the remark of Linnæus, that “before winter, all their hen chaffinches migrate through Holland into Italy.”

Therefore we may conclude that the chaffinches, for some good purposes, have a peculiar migration of their own, in which the sexes part. Nor should it seem so wonderful that the intercourse of sexes in this species of birds should be interrupted in winter; since in many animals, and particularly in bucks and does, the sexes herd separately (except at the breeding season).—G. W.

When Chaffinches Flock

THE matter of the autumnal flocking of chaffinches is a very puzzling one. The old Swedish naturalist, great lover of flowers and birds, Linnæus, gave the chaffinch a name meaning "bachelor," because he had noted the flocks of brightly-hued cock chaffinches; others have noticed only the flocks of quietly-coloured hens. We cannot be sure that these may not be birds who come to us in autumn from abroad.

In February the great chaffinch flocks begin to break up into pairs, and soon is heard the merry, ringing chaffinch song. The call-notes may be written down, "Whit, whit, whit," and "Spink, spink," and are heard all the year. The French have a saying, "As merry as a chaffinch," and the Germans, who have paid them great attention, call them by many complimentary names, such as "The noble finch," "Good-year," "The Fiddler," and "The Bridegroom," and certainly the cock chaffinch looks the very emblem of a bridegroom when he has put on his wedding costume, with its mingled black and white, blue, green, yellow, and brilliant rosy hues.

These German chaffinch lovers have tried to set the song to words—such as, "Finch, Finch, Finch, Finch, dost thou hear? Wilt thou not play the bridegroom?" Then they have written down what they call the

chaffinch's "wine-song," running, "Fritz, Fritz, Fritz, wilt thou wine with me?" And there is the "Double song," really the best of them, though it looks absurd as expressed by these syllables:

"Finkferlinkfinkfink, zischesia, harvelalalalaziskutchia."

When the flocks break up, the cock chaffinches often fight lively duels for their wives, and show anger and jealousy at other rival songsters. A mate won, nesting begins in April—when is woven, often in a fruit tree, that lovely, perfectly round chaffinch cup, with its feathery bed, and perhaps with a beautiful covering of grey lichen. Here the hen lays four or five of the familiar blotched eggs: "while the chaffinch sings on the orchard bough."



Rooks in Winter

"There is a large rookery round this house, the inhabitants of which seem to get their livelihood very easily; for they spend the greatest part of the day on their nest-trees when the weather is mild.

These rooks retire every evening, all the winter, from this rookery, where they only call by the way, as they are going to roost in deep woods. At the dawn of day they always revisit their nest-trees, and are preceded a few minutes by a flight of daws that act as it were as their harbingers."



*Study of a lonely, hungry kestrel, as he watches the flight
of a happy chaffinch flock*

Red- wings

When birds come to suffer by severe frost, I find that the first that fail and die are the red-wing field-fares [or redwings] and then the song-thrushes. . . .

It is no wonder at all that the redwings retreat from Scandinavian winters. . . .

In severe weather fieldfares, redwings, skylarks, and titlarks resort to watered meadows for food; the latter wades up to its belly in pursuit of the pupae of insects, and runs along upon the floating grass and weeds. Many gnats are on the snow near the water; these support the birds in parts.—G. W.

The Delicate Redwings

AT the head of our British thrushes stands the missel-thrush, largest and boldest of all: the winter singer, whose loud, wild, ringing notes are heard even above the storm, hence his proud name, storm-cock. Next in size, coming between the missel-thrush and the song-thrush, is the fieldfare, like his cousin the redwing a winter visitor from Scandinavia. The redwing is the most delicate of the thrushes; while he takes to the haws of the hedges when hard pressed for food, he is more of an insect-eater than the fieldfare, and so in frost and snow feels sooner the pinch of hunger. He is known at once from other thrushes by his reddish-brown wings, and his reddish-orange sides, which show up when he is in flight, and by the band of yellowish white which runs back from the bill over the eye. He comes to us to escape the cold winter of his native land—and we may suppose that often the redwings regret they have not flown farther south, for in a cold winter thousands upon thousands die of starvation. Often we have picked up their dead forms, mere bundles of feathers and bones, from the bottom of hedges, from holes, and under fences, remembering with pity that they came to us for hospitality. The other members of the thrush tribe are the song-thrush and the blackbird, and the ring-ousel, a summer

visitor, a haunter of wild and mountainous places, sometimes called the mountain blackbird, with a beautiful half-moon of white, the horns pointing upward, about the throat. Among the rare thrushes which occasionally appear from other lands is one of special interest to lovers of Gilbert White, named in his honour "White's Thrush," having been found first in Hampshire, his own country, a straggler from some far Siberian plain.

The only note of the redwing we hear in this country is a kind of whisper, expressed by the letters "syoun," as a migrating flock passes overhead at night—this is the call of the birds for keeping themselves together. Many have compared the song which the redwing sings when back in his own Scandinavian home to the nightingale's, speaking in highest praise of its clear, sweet notes ; but perhaps they mistook the singer, for observers whom we may trust declare that the song of the redwing in no way equals our own song-thrush's melodies.

They come to us about October, and stay till about April, moving in flocks over the open country they frequent. Wary and shy they are, like the fieldfares, except when overtaken by cold and hunger. They are birds of the open meadows, liking especially marshy ground near rivers, but flying at evening to roost in woods. Very thrush-like is their habit of feeding ; you see the redwing standing motionless, wing dropped, tail straight out, watching and waiting for sight of worm, snail, grub, or other insect, then suddenly hopping to make the quick gobble.

In their own country they build nests in low bushes, near the ground, nests cemented with clay, like the blackbird's, whose eggs the redwing's resemble in colour.

The Old Race of Deer-Stealers

Our old race of deer-stealers are hardly extinct yet.

It was but a little while ago that, over their ale, they used to recount the exploits of their youth ; such as watching the hind to her lair, and when the calf was born, paring its feet with a pen-knife to the quick, to prevent its escape, till it was large and fat enough to be killed ; the shooting at one of their neighbours with a bullet, in a turnip-field, by moonshine, mistaking him for a deer ; and the losing a dog in the following extraordinary manner :—

Some fellows, suspecting that a calf new-born was deposited in a certain spot of thick fern, went with a lurcher to surprise it ; when the parent hind rushed out of the brake, and taking a vast spring, with all her feet close together, pitched upon the neck of the dog, and broke it short in two.—G. W.

THIS interesting description of old-time deer-poachers is now a picture of the past. Before Gilbert White's day red deer abounded in his neighbourhood, in Wolmer Forest, and at the beginning of the eighteenth century amounted to five hundred head.

Where there were deer in those days there was an ever-present temptation to deer-stealers, leading on to every kind of idleness and wickedness. Mr. White recorded how, when a bishop of Winchester was urged to restock a famous chase with deer, he refused, saying, "It has done mischief enough already."

While forests and wastes with deer and rabbits caused much crime of old, when the game was removed, they were the greatest blessing to the poor, who, before the movement arose for inclosing commons, might employ themselves in cutting peat and other fuel, making brooms, and so on ; while on the commons their geese and young stock were kept at no expense.

Tits

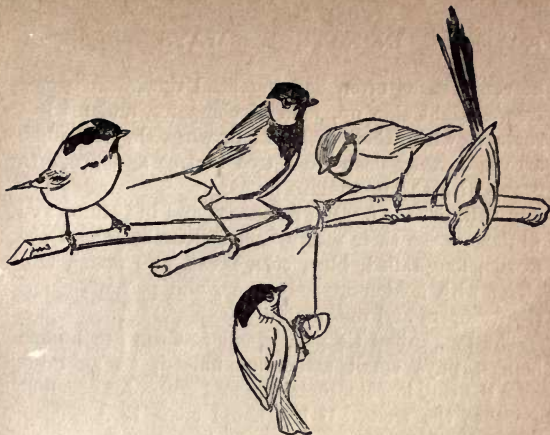
Every species of titmouse winters with us.

One species alone spends its whole time in the woods and fields, never retreating for succour, in the severest seasons, to houses and neighbourhoods—and that is the delicate long-tailed titmouse, which is almost as minute as the golden-crowned wren ; but the blue-titmouse, or nun, the cole-titmouse, the great black-headed titmouse, and the marsh-titmouse, all resort, at times, to buildings, and in hard weather particularly.

The great titmouse, driven by stress of weather, much frequents houses ; and, in deep snows, I have seen this bird, while it hung with its back downwards (to my no small delight and admiration), draw straws lengthwise from out the eaves of thatched houses, in order to pull out the flies that were concealed between them, and that in such numbers that they [the tits] quite defaced the thatch, and gave it a ragged appearance.

The blue-titmouse, or nun, is a great frequenter of houses, and a general devourer. Besides insects, it is very fond of flesh, for it frequently picks bones. It is a vast admirer of suet, and haunts butchers' shops. It will also pick holes in apples left on the ground, and be well entertained with the seeds on the head of a sunflower.

The blue, marsh, and great titmice will, in very severe weather, carry away barley and oat-straws from the sides of ricks.—G. W.



The Merry Titmice

WHILE the titmice have many habits in common, are lively, active, and sociable, yet each kind has strongly-marked points of character; and we who love birds and think about them should be ashamed if we could not recognise any of the five common sorts which might come to our gardens, or be seen roving through the woods.

It is very easy to attract four of the five to a garden. Cocoanuts split in half, bones, fat, suet, or the kernels of nuts are certain lures; and no birds are more amusing to watch, while they feed themselves, than these merry little acrobats.

The long-tailed tit is the smallest of the tribe—a greyish, rosy, fluffy, fairy-like bird he is, with a very long tail, always restless, extremely quick in all his

movements, as often hanging head downwards on a tree as right side up, fond of company, and fond of roaming with others of his kind, when they look like arrows as they flash from tree to tree and grove to grove with sharp, anxious notes.

All titmice are fond of company, and in autumn and winter we see their merry parties roaming about the woods, long-tailed, blue, cole, great, and marsh tits, along with golden-crested wrens, and perhaps a few tree-creepers and nuthatches.

The long-tailed tit pays small attention to human beings, pays small attention, indeed, to anything save the tiny insects, their eggs and grubs, for which he searches the trees. If he should come to a garden, it is only on a passing visit, or perhaps to make a nest.

In the spring the flocks of all tits break up. Then is heard the long-tailed tit's love-call, a delicate trill. These tits are early nesters, and their wonderful nests, the most wonderful of all our birds' nests, the most wonderful and beautiful of all nests in the world, perhaps, may be found in March, shaped something like a bottle (whence the name "bottle-tit") domed, mossy, outwardly covered with grey lichen, in some cases, and stuffed with hundreds and even with thousands of feathers. The nest is a large one, partly it may be because of the long tail, which the sitting bird in the nest perks up above her, and partly because there may be from ten to fifteen or even sixteen baby bottle-tits within.

The blue-tit is a study in yellow, white, and blue, always to be known by his white, blue-bordered cheeks and his yellow breast with its dark blue line. This marvellous little acrobat performs the most amusing antics as he swings about, in any position, on our cocoanuts. He will eat almost anything; and

beside the seeds of sunflowers, he will manage to break his way into the seed-heads of poppies, picking out every seed.

Lively and spirited, he is not meek, like the long-tailed tit; and because of his sharp little temper is sometimes called "billy biter," for the sitting bird will hiss and peck if disturbed in her nest-hole. The old name of "nun" suits the blue-tit's look better than his character; it was given because of the band of white on the head, like a nun's head-dress.

The cole-tit is to be known always by his black head, white cheeks, and white patch at the back of the head—this white patch is the distinguishing mark. It is seen on young tits so soon as their feathers appear, so there can be no mistake. One of the prettiest woodlandsights in winter is a party of foraging cole-tits; they are especially fond of haunting woods of pine and fir. They love beechmast, and feed more on the ground than others of their kind. Never are they still for a moment; and they are quite at home in any position on any kind of twig, no matter how slender—always busy and always happy, you would think.

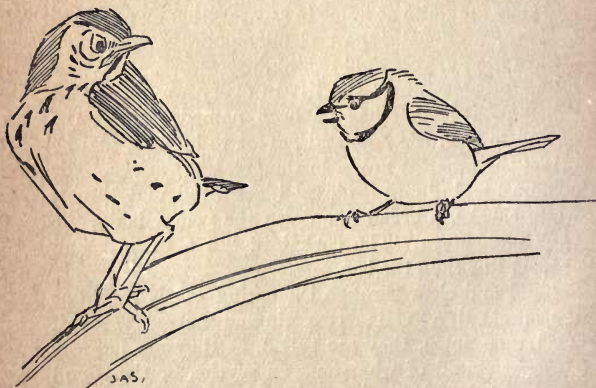
The greatest of all the tits in every way is the tit called great; well has he been named. He is the largest in size, the best and gayest to look at, and he utters the greatest notes, in the greatest variety. His colours are brilliant: glossy black head and throat, white cheeks, a broad line down the yellow body, the back olive-green. The cock bird has a broader and sharper line than the hen.

Loud and clear through the spring woods rings out the great-tit's call: two ringing notes repeated, whetstone notes, they are called, as they are like the pleasant sound of whetstone on scythe, or the sound of a saw being sharpened with a file. A sprightly bird,

and fearless at all times, he becomes remarkably bold when nesting ; then he will scold at intruders, and dash at other birds which may come near the nest. The mother bird, if touched when on the nest, will hiss and peck defiantly.

Like all the tits, the great-tit does a most useful work in the world, devouring grubs, caterpillars, and insects ; he is fond also of nuts, and maize is a great attraction.

Quietest and soberest of the titmice is the modest little marsh-tit. While he takes after the cole-tit in appearance, he is always to be known from his cousin by reason of his black forehead, head, and nape ; his upper parts are greyish, his cheeks, throat, and breast dull white. But he is a tit through and through, and full of pretty tricks and antics ; and we have known several pairs to become remarkably tame and friendly at our bird-table.



The blue tit is sometimes called "billy biter," because of his sharp little temper.

The Birds Like Snow-Flakes

A shepherd saw, as he thought, some white larks on a down above my house this winter : were not these the snow-flake?—G. W.

THE snow-bunting is prettily called “snow-flake”; for these birds in a flock do indeed look like snow-flakes when seen against a grey sky. These are winter visitors, coming from far Arctic regions. In some winters many small flocks are seen on our eastern coasts.

The head and under parts are white, the upper parts black; and Arctic travellers say, against the snow the white bodies hardly can be seen, and the birds look more like a flock of black butterflies than of birds—they have a dancing, wayward flight, very much like butterflies.

Fieldfares

It has always been a matter of wonder to me that fieldfares, which are so congenerous to thrushes and blackbirds, should never choose to breed in England : but that they should not think even the Highlands cold, and northerly, and sequestered enough, is a circumstance still more strange and wonderful. . . .

This bird, though it sits on trees in the day-time, and procures the greatest part of its food from white-thorn hedges ; yea, moreover, builds on very high trees [in its home in Scandinavia], yet always appears with us to roost on the ground.

They are seen to come in flocks just before it is dark, and to settle and nestle among the heath in our forest. — G. W.

Winter's Heralds

WHEN in November, while north winds do blow, we see flying overhead a flock of greyish thrushes, that might be missel-thrushes, yet are a little different, and utter as they fly a peculiar note of their own, a harsh, throaty kind of chuckle, like "chack, chack, chack," we know that the fieldfares have arrived from Scandinavia. And at once we have a sign that winter is at hand.

The first sight and sound of fieldfares in late autumn is as a landmark of the seasons. And what forgotten memories are stirred in some of our minds by their presence among us once again—memories of boyhood's days, and plains of snow, and frosts so hard that even these wary birds had seemed to lose their spirit and watchfulness, so that they allowed us to walk up quite close ere they fluttered feebly to shelter. Fieldfares suffer much in the cold, but at other times are renowned for their vigilance.

They come in late autumn to spend the winter with us, and stay until spring is well on the way, some flocks dallying on the coast perhaps all through April before departing to their northern summer haunts. Not for us is their love-song—a wild, sweet warble, they say it is—or the chance to scale a high pine tree for the thrush-like, clay-lined nest.

But we see much of these interesting, mysterious birds in winter, and all country people know them, often speaking of them as "fulfers," or "foreign

fulfers," sometimes as "bluefelts," or "bluebacks," in allusion to the bluish grey of the lower part of the back, which shows up in flight. They haunt open country, travelling in little parties and also in large flocks—great travellers they are, here one day, gone the next.

When first they arrive, food awaits them in plenty, insects of many kinds, hips and haws, barberry, juniper, and mountain-ash berries—they take to almost any kind of wild fruit. Many a mile of whitethorn hedge has been sown by the seeds they have ejected after feasting. After hard weather, when frosts break up, they are seen feeding where the diligent moles have thrown up hillocks. Perhaps moles know as well as any animal when a thaw is about to set in; they are then able to work near the surface again, and by their tunnellings throw up food for the birds. It is an old sign that a thaw is due when in frosty weather you see fieldfares or other thrushes feeding about molehills.

The roosting habits of fieldfares are an interesting study. When they are flying to their roosting-place, in heath, on the ground, or in low bushes, their harsh, loud cry is heard, then they are seen to wheel round before settling, becoming very noisy after alighting, remaining on the look-out for any danger all through the night hours.

Their loud cries, which we always hear when they are flying over our heads—bird calling to bird—gives us some faint idea of what a babel of sound must arise in a fieldfare nesting colony, in some far Norwegian forest, where hundreds of nests are grouped together, and all the parent birds are busy, through the long summer days and the short, light nights, with their family affairs.

The Flocking of Birds

"When I ride about in winter, and see such prodigious flocks of various kinds of birds, I cannot help admiring at these congregations, and wishing that it was in my power to account for those appearances, almost peculiar to the season.

The two great motives which regulate the proceedings of the brute creation are love and hunger.

As to love, that is out of the question at a time of the year when that soft passion is not indulged.

Now as to the business of food. As these animals [or birds] are actuated by instinct to hunt for necessary food, they should not, one would suppose, crowd together in pursuit of sustenance, at a time when it is most likely to fail; yet such associations do take place in hard weather chiefly, and thicken as the severity increases.

A crowd may make each individual appear safer from the ravages of birds of prey, and other dangers."

Bath- time

Cocks and hens, partridges and pheasants, etc., dust themselves, using that method of cleansing their feathers, and ridding themselves of their vermin.

As far as I can observe, many birds that dust themselves never wash; and I once thought that those birds that wash themselves would never dust; but here I find myself mistaken; for common house-sparrows are great dusting-birds, being frequently seen grovelling and wallowing in dusty roads; and yet they are great washers. Does not the skylark dust?—G. W.

How Birds Bath

BIRDS spend a great part of their lives in attempts to keep themselves clean—a task demanding immense care and trouble. The preening of feathers goes on almost continuously; and besides this, baths are regularly and frequently taken, whether in water or dust, and must be taken on pain of sickness and death.

Watch a barnyard fowl dusting, and afterwards basking in the sun. She is the very picture of a bird abandoned to luxurious pleasure as she wallows in the dust of a cart-shed, spraying herself by flapping her wings, opening and fluffing out her feathers, working with her feet to give an extra shower-bath, and gradually settling down into quite a hollow in the ground. Time passes heedlessly; for half an hour or more the happy fowl dusts and basks, and her one hope, no doubt, is that nothing may disturb her.

When on her legs again, she gives herself a thorough

good shaking, flapping the wings, and scratching with the feet, then carefully rearranging her ruffled plumage.

All along a dry, sunny hedgebank one may sometimes see the dusting-places of the partridges. Like pheasants and other game-fowl, they prefer dry to wet shampoos. Baths they must have, and in winter they will make shift with a bath in snow if no dusting-place can be found after a snowstorm.

The most elaborate toilets are made by the birds which live in water. Though always swimming, the ceremony of washing is a long and serious affair. While floating on the water, ducks may be seen treating themselves to a good shower-bath, raising the feathers and splashing till thoroughly wetted, afterwards coming ashore to shake their bedraggled plumage, and oil and preen themselves.

Other birds that wash go warily just to the margin of a pond or stream, and, after sipping, splash the water into spray with their wings, and so give themselves a gentle shower-bath. In winter as in summer a bath is enjoyed, and we often see a familiar black-bird, sparrow, or robin taking a bath in a puddle in the garden.

The shower-bath, deliberately taken, wets the feathers much more thoroughly than would a quick plunge into and out of water, such as the dive of a kingfisher, or the dip of the swallow as it skims over a pond's surface. We have seen a swallow dive beneath the surface in its eager pursuit of an insect, but the feathers would be pressed down so tightly and smoothly, and so well protected by oil, that no water would penetrate.

When a bird has managed thoroughly to wet its feathers, the elaborate process of preening and oiling takes place—a task of vital importance to the birds

that live in water, and performed by them several times a day.

The duck comes ashore to shake itself, flap its wings, and ruffle out the feathers, combing and loosening them with the beak. When they are well dried, the oiling begins. The oil for the toilet is stored in glands at the root of the tail. Raising the feathers above the glands, with its beak the duck squeezes out a little oil on to its mandible, and begins drawing the feathers, one by one, through the beak, thus oiling and smoothing them, then pressing them into place. The wing and breast feathers receive the most careful treatment. The duck can reach all its feathers with its beak except those on the head, but manages to oil the head by rubbing it on the breast and wings after they have been oiled. Last of all the tail is treated. The toilet completed, the duck is as perfectly protected against wet as if it had put on an oilskin suit.

Birds of the land and air, like larks, make a simpler toilet, its great purpose being to rid themselves of foreign invaders. Larks wash by dusting, and we never see them washing in water.

Most birds dislike to be washed by rain, though a few, like parrots, seem to enjoy a natural shower-bath. And some in rainy weather still manage to keep themselves spic and span, while others are quickly reduced to a bedraggled and unkempt state—starlings particularly, who after a bath are figures of fun indeed.

WHITE OWLS



*A very young barn owl has more the appearance of
advanced age than of Infancy*

White Owls

We have had, ever since I can remember, a pair of white owls that constantly breed under the eaves of this church. Their season of breeding lasts the summer through.

About an hour before sunset (for then the mice begin to run) they sally forth in quest of prey, and hunt all round the hedges of meadows and small inclosures for them, which seem to be their only food. We can stand on an eminence, and see them beat the fields over like a dog, and often drop down in the grass or corn.

I have "minuted" [or timed] these birds with my watch for an hour together, and have found that they return to their nest, the one or the other of them, about once in five minutes.

A piece of address which they show when they return loaded should not, I think, be passed over in silence. As they take their prey with their claws, so they carry it in their claws to their nest; but, as the feet are necessary in their ascent under the tiles, they constantly perch first on the roof of the chancel, and shift the mouse from their claws to their bill, that the feet may be at liberty to take hold of the plate on the wall, as they are rising under the eaves.

White owls seem not (but in this I am not positive) to hoot at all; all that clamorous hooting appears to me to come from the wood kinds. The white owl does indeed snore and hiss in a tremendous manner. I have known a whole village up in arms, imagining the churchyard to be full of goblins and spectres. White owls also often scream horribly as they fly along.

The plumage of the wings of every species of owl that I have yet examined is remarkably soft and pliant. Perhaps it may be necessary that the wings of these birds should not make much resistance or rushing, that they may be able to steal through the air unheard upon a nimble and watchful quarry.—G. W.



The ghost owl is the queerest-looking bird imaginable

The Ghost Owl

IN the roofs of many country churches white owls have bred for generations—they are often called church owls, as well as barn and screech owls. Though they rear six or seven young ones in a season, except when there are young, only one faithful pair is found at home in the old haunt, and none can tell of the fate of the others, to what ivied tower they have flown, lonely ruin, old dove-cote, loft of barn, farmhouse eave, or hollow oak of the woods.

We often climb to an old loft where in the day-time we may be sure of finding the white owls at home. On a summer day the mother bird will be seen, drowsy and blinking, standing guard over her eggs or young ones, and making the strangest hissing and snoring sounds. One great claw moves uneasily, now touching one or two dirty white eggs, then pressing closer to the motherly breast one or two scantily downed owlets, or a youngster more forward in feathering, and then the claw is raised threateningly, as if to scratch out our eyes if we dare to go a step nearer. There is no nest: but as the eggs are laid at intervals, the owlets first hatched help to keep warm the later eggs and young.

The floor of the roomy loft is deeply covered by the remains of feasts, left for many long years, bones crunching horribly underfoot. Gilbert White has a note of a hollow ash tree which had been the mansion of owls for centuries, and how at the bottom was found a vast collection of bones, bushels upon bushels — “the bones of mice (and perhaps of birds and bats) that had been heaping together for ages, being cast up in pellets out of the crops of many generations of inhabitants. For owls cast up the bones, fur, and feathers of what they devour.”

In cold wintry weather owls sleep much, for mice are scarce; but in the summer we always find they have a well-stocked larder, and there will be a great pile of freshly killed mice at the entrance of the place where the young are cradled. They take the house-mice which live in hundreds in the farmer's old barns, the long-tailed mice of the meadows, the reddish mice of the corn-fields, with mice of the woods, and the little shrew-mice which, though taken, are not eaten, having an unpleasant flavour.

The pellet of fur and bones is about the size of a



The church owl makes an excellent churchwarden

cob-nut, mouse-coloured, rough, and very light in the hand ; it may contain enough bones to make up the skeletons of three or four mice. Each pellet would be the remains of what an owl would consider a good evening meal ; so we can imagine the amount of good work which white owls do in the world, each pair killing thousands of mice in a season. Some seven hundred pellets once were carefully examined, and it was estimated that they contained the remains of more than two thousand five hundred mice.

Sometimes we see the ghostly form of a white owl flying by day, but he never seems happy in daylight, preferring to drowse time away until dusk falls, since his peculiar eyes are fitted best for sight in semi-darkness ; he is a night bird all over. The kestrel lives on mice like the owl, but hunts by day ; and what a difference this has made between the two hunters ! The kestrel's feathers are smooth and close-lying, the owl's are soft and fluffy ; the kestrel's wings are long and pointed, the feathers hard, the owl's are broad and round, not meant for swift rushes through the air, but for gliding, silent flight. The kestrel is like a feathered arrow, cutting the air ; the owl like a drifting ball of fluff. The toes of the owl are feathered as well as the legs, but from the soft feathering peer the sharpest claws. The curious, long-drawn, heart-shaped face seems made up of eyes ; by eye and ear, tuned to catch the least sight or sound of rustling mouse, the owl finds his prey where the kestrel in the same dim light would see nothing, drifts up unseen and unheard, and makes his unerring pounce.

His voice and form seem to belong to another world than that of our happy birds.

Wood- cock.

Sure there can be no doubt but that woodcocks and fieldfares leave us in the spring, in order to cross the seas, and to retire to some districts more suitable to the purpose of breeding. That the former pair before they retire, and that the hens are forward with egg, I myself, when I was a sportsman, have often experienced. It cannot be denied but that now and then we hear of a woodcock's nest, or young birds, discovered in some part or other of this island; but then they are always mentioned as rarities, and somewhat out of the common course of things; but as to redwings and fieldfares, no sportsman or naturalist has ever yet, that I could hear, pretended to have found the nest or young of those species in any part of these kingdoms.

At present, I do not know anybody near the sea-side that will take the trouble to remark at what time of the moon woodcocks first come: if I lived near the sea myself, I would soon tell you more of the matter. One thing I used to observe when I was a sportsman, that there were times in which woodcocks were so sluggish and sleepy, that they would drop again when flushed just before the spaniels, nay, just at the muzzle of a gun that had been fired at them. Whether this strange laziness was the effect of a recent fatiguing journey, I shall not presume to say.—G. W.

The Bird that Carries its Young

A FEW woodcock nest in this country, but most of them come in in October, and depart in March for northern Europe.

The woodcock is one of those beautiful birds of sober hue, painted by Nature in such colours and patterns as best conceal it, in its natural haunts—a large reddish-brown bird, curiously barred and mottled, only by its bright eye to be distinguished from the shadows and the fallen leaves of the shady woodland places which it haunts by day; for this is a night-flying bird. The long beak is a spear for probing soft boglands for grubs and earthworms.

So long ago as Gilbert White's day the idea was known that woodcock carry their young. It was suggested that they carried them in their beaks; but Gilbert White could not accept this. "I have only to remark," he said, "that the long unwieldy bill of the woodcock is, perhaps, the worst adapted of any among the winged creation for such a feat of natural affection."

The object of the mother bird in carrying her young would be to remove them to a place of safety in case of danger, or to take them, after they had been hatched in a dry place, to a swamp or bog where food could be found easily.

Before the idea was accepted that woodcock do indeed carry their young—flying with a young bird securely held between the thighs—people often were puzzled by the mysterious disappearance of the birds from a nest. In one case it was determined to prevent them going away, and a nest was ringed round with hurdles, thatched closely with heather. The woodcock continued to sit on her eggs, and was constantly watched—but not by night. And one morning she and her young ones, in spite of the fence, had vanished.

Gipsy-Folk

“With regard to these peculiar people, the gipsies, one thing is very remarkable, and especially as they came from a warmer climate [from Egypt and the East], and that is, that while other beggars lodge in barns, stables, and cow-houses, these sturdy savages seem to pride themselves in braving the severities of winter, and in living under the open sky the whole year round.

Last September was as wet a month as ever was known; and yet, during those deluges, did a young gipsy girl lie in the midst of one of our hop-gardens, on the cold ground, with nothing over her but a piece of blanket, extended on a few hazel-rods bent hoop fashion, and stuck into the earth at each end, in circumstances too trying for a cow in the same condition; yet within this garden there was a large hop-kiln, into the chambers of which she might have retired, had she thought shelter an object worthy her attention.”

THE LANGUAGE OF FOWLS



The pullet lets everyone know that she has laid an egg

Cocks and Hens

No inhabitants of a yard seem possessed of such a variety of expression, and so copious a language, as common poultry.

Take a chicken of four or five days old, and hold it up to a window where there are flies, and it will immediately seize its prey with little twitterings of complacency; but if you tender it a wasp or a bee, at once its note becomes harsh and expressive of disapprobation, and a sense of danger.

When a pullet is ready to lay, she intimates the event by a joyous and easy soft note. Of all the occurrences of their life, that of laying seems to be the most important; for, no sooner has a hen disburdened herself, than she rushes forth with a clamorous kind of joy, which the cock and the rest of his mistresses immediately adopt. The tumult is not confined to the family concerned, but catches from yard to yard, and spreads to every homestead within hearing, till at last the whole village is in an uproar.

As soon as a hen becomes a mother, her new relation demands a new language; she then runs clucking and screaming about, and seems agitated as if possessed.

The father of the flock has also a considerable vocabulary; if he finds food, he calls a favourite to partake; and if a bird of prey passes over, with a warning voice he bids his family beware.

The gallant chanticleer has, at command, his amorous phrases, and his terms of defiance. But the sound by which he is best known is his crowing: by this he has been distinguished in all ages as the countryman's clock or 'larum—as the watchman that proclaims the divisions of the night.—G. W.

The Language of Fowls

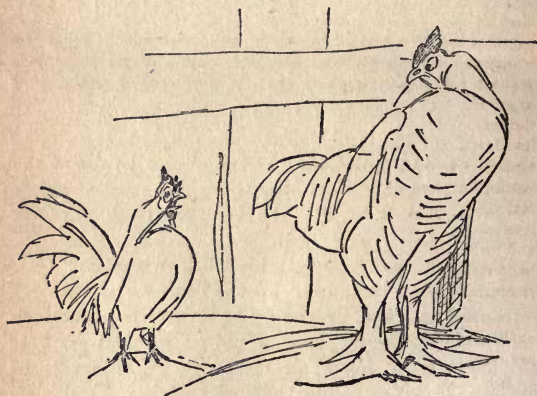
THE language of the barnyard fowls tells us tales to-day of the time when they were wild fowl of the jungle, from the crow of the cock, cheerful Chanticleer's trumpet to the morn, to the contented chuckling of his good dames, and the little crooning notes they utter when about to lay their eggs. The language of the cock, his call to his hens, his notes of defiance and of warning, is older far than our language, older perhaps than man. Many of the quaint habits of our chickens became what they are long ages before chickens were kept for the sake of fresh eggs for breakfast.

The cock crows to tell his flock where he, their guardian, is to be found. In the days when the flock wandered at large, he could not always be in attendance with the hens; they would go wandering off to quiet places to lay their eggs. So at intervals he upraised his voice, calling the flock together. And when a hen had laid an egg, she could come from her nest with rejoicing notes, and when they were answered she knew where to go to rejoin the party.

Crowing at night was no doubt one of the cock's ways of giving alarm. Cock pheasants roosting in the wood wake up and crow at any disturbance, giving warning to others; and it is impossible to approach guinea-fowl at night without raising an

outcry. Though kept so long in captivity, cocks and hens have retained much of their natural instinct of vigilance.

In the old strains of chickens we have a suggestion of their original colouring when they were wild fowl ; it is likely that the wild ancestors of our poultry wore reddish feathers, like those of the "Sussex Red," a famous old breed, one of the oldest, healthiest, and hardiest of them all.



The challenge

House-Martins

A few house-martins begin to appear about the 16th of April.

About the middle of May, if the weather be fine, the martin begins to think in earnest of providing a mansion for its family.

The crust or shell of this nest seems to be formed of such dirt or loam as comes most readily to hand, and is tempered and wrought together by little bits of broken straws, to render it tough and tenacious. As this bird often builds against a perpendicular wall, without any projecting ledge under it, it requires its utmost efforts to get the first foundation firmly fixed, so that it may safely carry the superstructure. On this occasion the bird not only clings with its claws, but partly supports itself by strongly inclining its tail against the wall, making that a fulcrum; and, thus steadied, it works and plasters the materials into the face of the brick or stone. But then, that this work may not, while it is soft and green, pull itself down by its own weight, the provident architect has prudence and forbearance enough not to advance her work too fast; but, by building only in the morning, and by dedicating the rest of the day to food and amusement, gives it sufficient time to dry and harden.

In about ten or twelve days is formed an hemispheric nest, with a small aperture towards the top—strong, compact, and warm, and perfectly fitted for all the purposes for which it was intended.

But, then, nothing is more common than for the house-sparrow, as soon as the shell is finished, to seize on it as its own, to eject the owner, and to line it after its own manner.

After so much labour is bestowed in erecting a mansion, as nature seldom works in vain, martins will breed on, for several years together, in the same nest, where it happens to be well sheltered, and secure from the injuries of weather.

The shell, or crust, of the nest is a sort of rustic-work, full of knobs and protuberances on the outside; nor is the inside of those that I have examined smoothed with any exactness at all; but is rendered soft and warm, and fit for incubation, by a lining of

small straws, grasses, and feathers ; and sometimes by a bed of moss interwoven with wool. The hen lays from three to five white eggs.

As the small birds presently arrive at their full growth, they soon become impatient of confinement, and sit all day with their heads out at the orifice, where the dams, by clinging to the nest, supply them with food from morning to night. For a time, the young are fed on the wing by their parents : but the feat is done by so quick and almost imperceptible a sleight, that a person must have attended very exactly to their motions before he would be able to perceive it.

As soon as the young are able to shift for themselves, the dams immediately turn their thoughts to the business of a second brood ; while the first flight, shaken off and rejected by their nurses, congregate in great flocks, and are the birds that are seen clustering and hovering, on sunny mornings and evenings, round towers and steeples, and on the roofs of churches and houses. These congregations usually begin to take place about the first week in August ; and, therefore, we may conclude that, by that time, the first flight is pretty well over. The young of this species do not quit their abodes altogether ; but the more forward birds get abroad some days before the rest. These, approaching the eaves of buildings, and playing about before them, make people think that several old ones attend one nest.—G. W.

The Life-Story of the House-Martins

IN the days when this life-story was written—1773—martins, like swallows, must have been far more abundant, and Gilbert White records in another note that he had even seen them nesting in the Strand and in Fleet Street, in London town. What a crowd would be caused in the Strand to-day by the sight of a martin hawking for flies amid the roaring traffic !

The house-martin is the swallow with the white rump ; that brilliant white patch on the lower part of the back at once sets him apart from others of his kind. Then he is smaller than the swallow, he has not the same long forked tail, his wings are shorter, and he differs again in having legs covered with soft downy feathers. The under parts are pure white, whereas the swallow wears a beautiful chestnut-brown bib on his throat, and is dullish white beneath. The martin flies with the utmost grace, yet not so speedily as the swallow, or with such marvellous twists and turns.

Our hordes of sparrows are now more than ever the enemies of the martins, having learnt so well that they can drive martins from their nests ; and sparrows are wonderfully quick at learning, and profiting by experience. Sometimes the martin defeats the enemy by building its nest where sparrows cannot easily land—a nest only to be reached by a curving upward

glide beyond the sparrows' limited powers of flight. Even the martins themselves may often make several attempts before accomplishing the difficult feat of flight they have set themselves. Then one also sees the sparrows vainly attempting the glide to the nest, fluttering about in an eager, angry way—to the martin's great indignation and fear.

Many are the stories told of this warfare between the strong, pugnacious sparrows and the light-as-air martins. One summer a martin's nest in which we were taking an interest was besieged by sparrows, for a long while unavailingly. But they persevered, and after many weeks, when the martin's first clutch of eggs had been hatched, mastered at last the peculiar trick of flight needed for landing on the nest, which was situated far beneath a projecting cave. Then they stormed the citadel, took it by force, and, actually before horrified onlookers' eyes, ejected the baby martins one by one, and not content with throwing them to the ground, fell upon them there, and killed them as they lay helpless and dying. They then calmly occupied the conquered mud-castle.

But there are stories to be told showing how martins may take revenge on their persecutors. Years ago some sparrows had hatched their young in a martin's nest at Hampton Court. Soon afterwards there appeared at the nest a number of martins who in a body proceeded to attack the two sparrows; outnumbering them, they set about pecking the nest to pieces, and massacring the unfledged young.

Another old story of the nests at Hampton Court tells how a pair of swallows were driven from their home by a pair of sparrows. The hen sparrow duly laid her eggs in the swallow's nest. While she was sitting one day, several martins flew up, and set to

work to close up the nest's opening. A carpenter who had watched every stage of the eventful story presently examined the nest, and there found the imprisoned hen sparrow dead on her eggs.

Sometimes the martins are avenged, when their nests have been stolen by sparrows, by the nests giving way under the burden of the material the sparrows stuff in—a just retribution for the sparrows !

Once the martins begin nesting, they allow themselves no rest from earliest dawn to deepest dusk. All through the long summer days they are on the wing, feeding their young with never-flagging zeal. One brood succeeds another, until perhaps fifteen of their offspring have been launched on the world, and it will be far into October, even into November, before all the family cares are ended, and the diligent birds may think of setting off for their well-earned winter holiday in sunny Africa. To sit at an upper window where there is a nest and watch the martins as they hawk for food for their young, is to be very deeply impressed by their admirable qualities as parents.

The number of visits they pay their nestlings in a given hour varies with the time of day, the weather, the age of the young ones, and the available supply of food. On one day it may be found by careful timing that one or other of the parent birds comes back with food for the hungry mouths at home ten times in an hour. Another day, at the same time, perhaps a hay-field has been cut near the garden, and the air above it is alive with the insect life deprived of sanctuary. Then the birds hunt with feverish energy, paying as many as twenty-four visits in an hour, or one visit on the average every two and a half minutes. They come and go with only a moment's delay for stuffing

food down gaping bills, just flashing in and flashing out again, always being greeted by joyous sounds from their family. Each of the parents gives a loud chirp on darting away for a fresh beakful of insects, as much as to say, "There!—be good till I come again!"

At night there issues from the nest a curious low, musical twittering sound, continued for hours, as if the martins are birds of such restless energy, and such birds of the air, that they ill brook the tedium of the dark hours when no hunting is possible, and no feeding, and there is nothing to do but lie abed and croon lullabies.

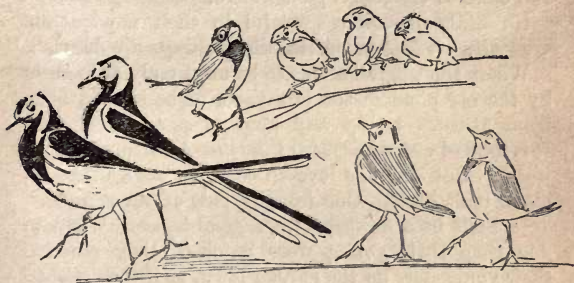


Friendly Birds

While the cows are feeding in the moist low pasture, broods of wagtails, white and grey, run round them, close up to their noses, and under their very bodies, availing themselves of the flies that settle on their legs, and probably finding worms and larvæ that are roused by the trampling of their feet.

Nature is such an economist, that the most incongruous animals can avail themselves of each other! Interest makes strange friendships.—G. W.

Birds that Befriend Animals



The wagtails are the smallest birds that "walk," and this, with their brilliant black and white dress, makes them quite distinguished in appearance beside the sparrow family, who can only "hop"

WAGTAILS, searching for insects, in their lively way, among grazing cattle—starlings perching on the backs of sheep, working to rid them of the insects in their wool—rooks with wagtails following the plough-horses as the plough turns up the grubs and worms for their pleasure—these are all familiar associations.

It is charming to see the dainty wagtails taking irritating flies from the cow's leg or body, or, perched on her head, picking them from her ears.

We have no small bird that is more striking to the eye than our pied wagtails, with their brilliant black

and white feathering. They always look so distinguished—as if they are the high-born lords and ladies of the bird world. The name wagtail was well chosen, as the tail is for ever flitting up and down while the pretty bird goes running, in its quick, dainty way, over the lawn or over the ploughland—and it runs just as quickly and daintily over the smooth, green, close-shaven lawn as about the furrows and clods of the rough plough-field.

No birds are more graceful in their movements. Wagtails, on foot or on the wing, always are dancing.

Where the wagtail seems to be most truly at home is by the old pond in the farmyard, or beside the little trout stream—or by any kind of pond or stream. It is fond of water because of the insect life found about water. But wagtails love to come to our gardens to make their nests. One friendly pair of our acquaintance built in a flowerpot in a glass-house. When in due time their young were hatched, they paraded their youngsters on the garden lawn, as if they wished to show us what lovely little things they were.

Then we have often found the nest in the yards of the farmers whose cattle the wagtails befriend—placed in the side of a stack of faggots or a straw or manure-heap, or perhaps in some crevice of a bank of rock. One nest we once knew about was in a cutting on a railway-line, set in the bank, and in this nest a cuckoo had placed one of her eggs for the wagtail to hatch. The nest is of dry grasses and rootlets, lined with feathers and hair; the eggs are faintly bluish, speckled over with greyish-brown marks.

Country boys call the wagtails “dishwashers,” and often know them by this curious name alone.

By rushing mountain streams, as by quieter waters, you may see the grey wagtail—really a beautiful

study in grey, black, and yellow, with a breast like a bright canary's. This is a graceful and lively bird, with a very long tail. As he goes dancing about in the air, he utters a sweet, swallow-like song.

A third member of the family is the yellow wagtail, not a resident among us, but one of our bird-guests of the summer. This handsome bird is greenish olive above, rich yellow beneath, with a bright sulphur-yellow streak above the eye. A bird of the rolling downs and open pastures, the yellow wagtail is called seed-fool, barley-bird, and seed-lady, coming as it does in the days of seed-sowing.

It is not surprising that there should be cases of friendship between four-footed and feathered creatures, when we think how much birds have in common with beasts.

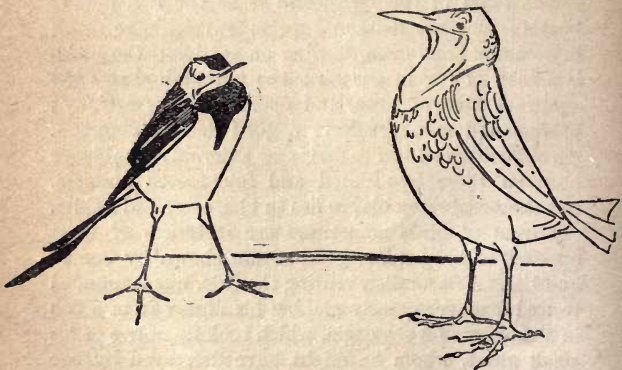
The eagle in the bird-world is as the lion among beasts; cats are feathered owls; ravens have much in common with dogs, feeding on carrion; the hawk is a kind of fox in the air; the nuthatch shares the squirrel's love of nuts, and opens them as artfully; parrots and monkeys have a good deal in common. An old writer claimed to find some external resemblance between these two-footed and four-footed animals, but their real resemblance lies in character and habits.

Lovers of birds sometimes see instances of what appears to be genuine good-nature shown by one to another. A naturalist, visiting the Nile, was astounded to find a plover quietly making his dinner from a fish in the claws of a sea eagle, which took no notice of his small guest, whom he might have destroyed by one blow of his beak.

The chief way in which birds befriend four-footed—also two-legged and featherless—animals is by their grand task of keeping down insect life. Most birds are

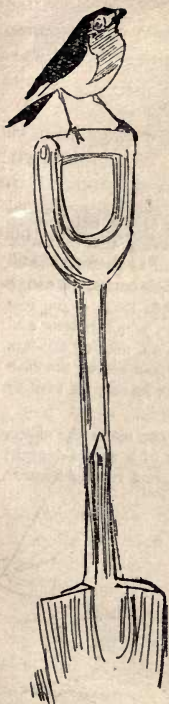
insect-eaters ; and if it were not for their ceaseless war on insects we cannot imagine how there could be room in the world for any other but insect life. Whenever birds are destroyed and harassed by man, they are revenged, and the destroyers are punished by the devastation of their trees and crops by insects, by caterpillars, or by plagues of mice.

When robin redbreast goes hopping along beside the gardener, when he is digging, he is co-operating with a two-legged animal, as the rook is working for the farmer when he follows the plough. We value birds—(some of us)—for their beauty, their charm, and their voices—perhaps we seldom appreciate the work they do for us, and how without this work there would be no place for us on earth.



Wagtail: "Good-bye, I must go and make my old cow comfortable."

Starling: "And I must be trotting along to look after the sheep."



The gardener's friend

The Hen that Loved the Horse

“A very intelligent and observant person has assured me, that keeping but one horse, he happened also on a time to have but one solitary hen.

These two spent much of their time together, in a lonely orchard, where they saw no creature but each other. By degrees, an apparent regard began to take place between these two.

The fowl would approach the quadruped with notes of complacency, rubbing herself gently against his legs, while the horse would look down with satisfaction, and move with the greatest caution, lest he should trample on his companion.

Thus, by mutual good offices, each seemed to console the vacant hours of the other.”

Pea- cocks

Happening to make a visit to my neighbour's peacocks, I could not help observing, that the trains of those magnificent birds appear by no means to be their tails, those long feathers growing all up their backs. A range of short, brown, stiff feathers, about six inches long, is the real tail, and serves as the fulcrum to prop the train, which is long and top-heavy, when set on end. When the train is up, nothing appears of the bird but its head and neck; but this would not be the case were those long feathers fixed only in the rump; as may be seen by the turkey-cock when in a strutting attitude.

By a strong, muscular vibration these birds can make the shafts of their long feathers clatter like the swords of a sword-dancer; they then trample very quick with their feet, and run backwards towards the females.—G. W.

The Peacock's Train and Love-Dance

WHAT object is served by the glorious train of the peacock ?

No doubt he is proud of it, and delights in showing it off, in all its beauty of colour, while dancing and strutting, in the love-season, before the modest pea-hen.

But the train, strange as it seems, serves a purpose of concealment. On a white terrace in this country it shows up vividly from afar ; but when in summer a peacock leaves his garden home, and flies up into a tree in a wood near by, you may then see how wonderfully the glorious colours blend in with the golden-green sunlit foliage.

In the peacock's jungle home in the tropics, full of lights and colours, fruits and flowers, all the varied hues of the bird mingle with his surroundings. He looks perhaps like some beautiful flowering shrub himself, so that the eyes of the beast of prey may pass him over.

This has been pointed out by a great naturalist-painter, Abbot H. Thayer. He has shown also how the peacock's burnished neck, seen from below when the bird is in the trees, is a brilliant blue, like a part of the tropical sky ; but when looked down upon from above, displays green lights, which melt in with the green of the grass, and so hide the bird from a bird of prey above.

All colours and patterns of birds and beasts, he would have us believe, serve for concealment.

The Nightjar

There is no bird, I believe, whose manners I have studied more than that of the goat-sucker [or nightjar, fern or churn-owl], as it is a wonderful and curious creature.

I have always found, that though sometimes it may chatter as it flies, as I know it does, yet in general it utters its jarring note sitting on a bough ; and I have for many a half-hour watched it as it sat with its under mandible quivering. It perches usually on a bare twig, with its head lower than its tail.

This bird is most punctual in beginning its song exactly at the close of day ; so exactly that I have known it strike up more than once or twice just at the report of the Portsmouth evening gun, which we can hear when the weather is still.

You will credit me, I hope, when I assure you, that, as my neighbours were assembled in an hermitage on the side of a steep hill where we drink tea, one of these churn-owls came and settled on the cross of that little straw edifice, and began to chatter, and continued his note for many minutes ; and we were all struck with wonder to find that the organs of that little animal, when put in motion, gave a sensible vibration to the whole building.—G. W.

The Nightjar and his Rattle-Song

THE nightjar, rising in June from beneath one's feet, from among the heather of a moor, or the dead bracken of a wood, goes away with a strange, fluttering flight, like a great wounded moth—a dusky brown form, white feathers showing—making not a sound of wing-beat. This way and that it flutters, suddenly to settle again, keenly watching the intruder. Then, looking down, you see perhaps, at your feet, two long, polished eggs, marbled with ash and purple, like large coloured acorns—eggs so well matching the bracken or the heather twigs on which they lie—for there is no nest—that you might never have seen them if the bird had not told the tale. Only the nightjar goes away from under one's feet in this peculiar fluttering way. But it is a very different flight when the bird is hunting moths, beetles, or cockchafers—swift, sure, and silent, swallow-like indeed.

In the month of May the nightjar comes to sing his strange crooning rattle-song, coming faithfully back to an old haunt. By day he sits, concealed by his colour and markings, among the heather of the moor, or the bracken of the wood, or retires to the gloom of some dingle, not stirring, if you come his way, till you nearly tread upon him. His habit of perching length-wise, seeming to lie along a branch, tends also to conceal him, when he sits brooding in the gloaming.

When the eggs are hatched, the nestlings, in their greyish down, might be taken for upturned leaves; the eye passes over them unseeing.



The end of the world for the beetle

The whirring rattle-song is something like the whirr of a threshing-machine, or it reminds one a little of the grasshopper warbler's note, or the purring of a cat—such a purring as a giant cat might make, for the note is very powerful, and carries far through the

silent night, the rattling continuing from a minute to five minutes on end.

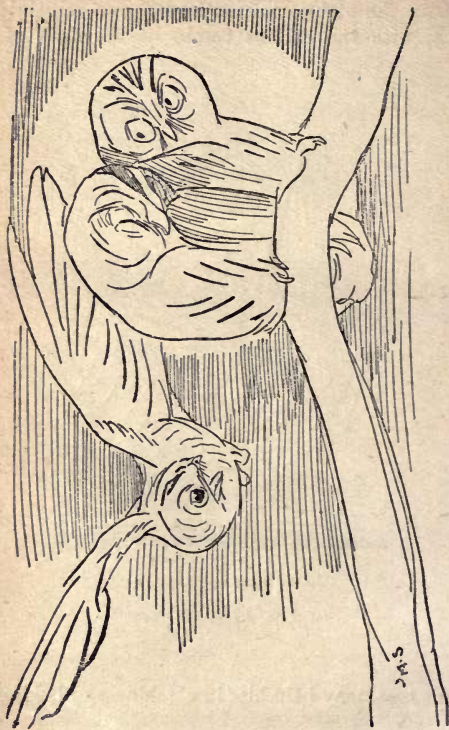
About the nightjar's mouth are great stiff bristles, which, with the curious combs at the sides of the



After a good night's hunting

middle toes, may help him in catching and holding his prey.

He is known by many names, but nightjar and evejar suit him best. Country people call him the night-hawk. He was named fern-owl from his love of bracken, being as closely associated with bracken as the part-



When the nightjar comes along with his rattle-song, it's time for the owls to be moving

ridge with stubble or the grouse with heather. Other names, like dor-hawk and jar-owl, show that country people hardly knew what to make of this bird, and learned naturalists also are puzzled to fit the nightjar into his proper place among the bird families.

Outwardly, he has certainly something in common with owls and hawks—the soft pencilled plumage of the owl, and the same noiseless flight, the long tail of cuckoo or hawk, the small but widely gaping bill of the swifts, and a way of hawking for prey like the flight of swift or swallow.

He is really our only species of a family that is neither hawk nor owl, a family with members nearly all over the world.

Wheel-bird was a pleasing old name from the wheeling flight ; churn-owl is a name sometimes used, from the churning sound of the song ; and goat-sucker was a foolish name given of old, perhaps because the nightjar was fond of wheeling about the herds of goats at night, where he found good hunting among the insects, and became suspected of taking goats' milk.



Late Singers

"I heard many birds of several species sing last year after mid-summer ; enough to prove that the summer solstice is not the period that puts a stop to the music of the woods. The yellow-hammer, no doubt, persists with more steadiness than any other ; but the wood-lark, the wren, the redbreast, the swallow, the whitethroat, the gold-finch, the common linnet, are all undoubted instances of the truth of what I advanced."

The Fly- catcher

The flycatcher is, of all our summer birds, the most mute and the most familiar; it also appears the last of any.

It builds in a vine, or a sweet-brier, against the wall of a house, or in the hole of a wall, or on the end of a beam or plate, and often close to the post of a door where people are going in and out all day long.

This bird does not make the least pretension to song, but uses a little inward wailing note, when it thinks its young in danger from cats and other annoyances. It breeds but once, and retires early.

There is one circumstance characteristic of this bird which seems to have escaped observation; and that is, it takes its stand on the top of some stake, or post, from whence it springs forth on its prey, catching a fly in the air, and hardly ever touching the ground, but returning still to the same stand for many times together.—G. W.

Fishers of Flies

THE spotted flycatcher, who spends the summer with us, fishing, in a most graceful way, for flies, arrives in the beautiful month of May. Once he has taken up his quarters in a good place for fly-fishing, he seldom moves far away, but spends his time launching himself into the air from a few favourite perches.

He is notable chiefly for his skill in catching flies on the wing—you may hear the sharp click of his beak as it closes on its prey—and for the pretty picture he makes as he goes darting continuously from his perch on a small circular tour through the air, occupying only a moment or two. For in appearance he is very modest, a sober little brown bird, ash-brown above, whitish beneath, with dark spots and streaks on his head, throat, and sides of the breast. And his notes are mostly a quiet chirping.

Year by year the flycatcher returns to the same nesting-place. His fondness for building on the end of a projecting beam has earned him the name of "beam-bird." The nest is a slight structure of dry grass, rootlets, moss, hair, and feathers, wherein are laid five or six bluish or greenish eggs, marked with faint reddish brown. We have found the first egg in a flycatcher's nest as late as the end of June.

The mother bird while sitting is fed by her mate.

When the young are hatched it is a pretty sight to see the party of well-spotted baby birds sitting on a fence-top in a row, being fed by their parents, one after the other, all the young birds opening wide their mouths in the hope of flies.



A Swallow's Strange Nest

"A certain swallow built, for two years together, on the handles of a pair of garden shears, that were stuck up against the boards in an out-house, and therefore must have her nest spoiled whenever that implement was wanted.

And what is stranger still, another bird of the same species built its nest on the wings and body of an owl that happened by accident to hang dead and dry from the rafter of a barn.

This owl, with the nest on its wings and with eggs in the nest, was brought as a curiosity worthy the most elegant private museum in Great Britain. The owner, struck with the oddity of the sight, furnished the bringer with a large shell, or conch, desiring him to fix it just where the owl hung. The person did as he was ordered ; and the following year a pair, probably the same pair, built their nest in the conch and laid their eggs.

The owl and the conch make a strange, grotesque appearance."

The Plaintive Hedge-Sparrow

Hedge-sparrows have a remarkable flirt with their wings in breeding-time. As soon as frosty mornings come, they make a very piping, plaintive noise.—G. W.

THE hedge-sparrow's habit of flirting its wings has won him the name "Shufflewing." Another common name is "Dunnock," another "Hedge-accentor," and these really are better than his proper name, since he is no sparrow, and only like a house-sparrow in having brownish upper plumage, and his bill is soft, for insect-eating, while the sparrow's is hard for grain-eating.

These are very quiet, modest, and plaintive little birds, sober in hue, and sober in character. Very sweet is their gentle song, heard sometimes in winter, as well as in the summer. When the hedge-sparrows come to our bird-table, they always offer up a song of thanksgiving, before and after their meal. And in winter, when they have been hunting about industriously in the shrubbery, whatever the weather, the little song is heard when the search is finished.

What a glad moment that is when, for the first time in a season, one looks into a hedge-sparrow's nest, and sees, lying on the bed of horse-hair, the lovely sky-blue eggs! It is one of the prettiest nests, with its green moss and blue eggs, when set, in April, in a furze-bush, all golden with bloom.

Roost ing Time

The earnest and early propensity of the game-fowls to roost on high is very observable; and discovers a strong dread impressed on their spirits respecting vermin that may annoy them on the ground during the hours of darkness.

Hence poultry, if left to themselves and not housed, will perch the winter through on yew trees and fir-trees; and turkeys and guinea-fowls, heavy as they are, get up into apple trees; pheasants also, in woods, sleep on trees to avoid foxes; while pea-fowls climb to the tops of the highest trees round their owner's house for security, let the weather be ever so cold or blowing. Partridges, it is true, roost on the ground, not having the faculty of perching; but then the same fear prevails in their minds; they never trust themselves to coverts, but nestle together in the midst of large fields, far removed from hedges and coppices, which they love to haunt in the day, and where, at that season, they can skulk more secure from the ravages of rapacious birds.

As to ducks and geese, their awkward, splay, web-feet forbid them to settle on trees; they therefore, in the hour of darkness and danger, betake themselves to their own element, the water, where, amidst large lakes and pools, like ships riding at anchor they float the whole night long in peace and security.—G. W.

The Sleep of Birds

WHEN, "like ships riding at anchor," ducks or geese float asleep at night on a pond, they are secure from any fox who may prowl around the farmyard; and the fox who attempts to attack them may pay the death-penalty. An old story tells how a fox swam out into a pond for a goose supper one night, and was found drowned next morning. It was supposed that a ferocious old gander, who was more at home in the water than the fox, had so valiantly buffeted him about the head with its wings, that poor reynard found no escape possible, and at last sank from exhaustion.

When the duck-pond is frozen, the farmer may break the ice at the edge to prevent Mr. Fox walking out to attack his sleeping ducks. Occasionally a fox has been known to meet his death by breaking through thin ice when stealing out after a duck or other water-bird.

When ducks sleep on moving water, which may carry them to a shore, and all the dangers of the shore, they paddle with their feet, automatically and unconsciously, to keep themselves safely afloat.

Some birds go very warily to roost; others go very carelessly, chattering, singing, or crowing; and some go to roost almost as deliberately as we ourselves go to bed at bed-time.

Cock pheasants go to roost crowing, as if to give a signal to others that it is time for bed. Young pheasants, reared by hand, soon find their way up into trees at roosting-time after they have been turned into a covert; but until they take to the trees as a matter of course, the gamekeeper may have some anxious nights, as they are at the mercy of foxes if they roost on the ground, or too low in trees.

Partridges are more clever, and more vigilant. They know well that the safest place where they can roost is an open space on the ground. In some little hollow of an open field a covey of twenty birds will roost together, wing to wing, in a compact circle.

Guinea-fowl are especially wide-awake. They will go very high into trees to roost, and in hard weather will mount the trees by day. They break out into wild alarm-notes at the least disturbance.

Birds will sleep in what seem to us to be curious, uncomfortable, and insecure positions. Some, like the heron, may go to sleep when standing on one leg, with the other drawn up and hidden among the feathers of the breast, while the head is turned round and buried in the back. Small birds may be seen sleeping cuddled together on slender twigs, off which one might think they would easily fall. We observe with wonder the ease with which swallows rest on so thin a perch as a telegraph wire.

But when once a perching bird's claws have gripped a perch, it is more difficult for the bird to rise up and depart than to fall off. For directly the bird is at rest on the perch, muscles are brought into play that automatically lock the claws, and in the deepest sleep the grip cannot be relaxed. There are tendons which pass direct from the muscles of the thigh which bend both the knee and the toes, the bird sleeping

with bended knees, without any effort being firmly locked to its roost.

Among the small birds that cuddle for warmth in the night are the wrens, many of whom will crowd into one hole in a thatched roof to sleep. It is as if they remembered the warmth and comfort that was theirs when, as baby birds, they cuddled together in the nest. We watched once a family party of young wrens taking their first flight. The midget birds headed directly for a dense laurel bush near the nest, and there some time later we found them all cuddled on a twig, as if trying to make-believe they were still in their deep, warm cradle.

When young birds can fly, but still roost at night in the nest where they were born, their mothers send them to bed, at the proper time, in much the same way as human mothers pack off their youngsters and tuck them up for the night. In summer-time we often see swifts, swallows, and martins chasing their little ones, with loud cries, to the nests beneath the eaves. From nests where young martins sleep there arises through the night at intervals a most curious chattering, sing-song sound—as if the birds are crooning themselves to sleep with a lullaby.

An old writer gives an amusing account of a swallow putting her babies to bed. As they began to grow up they filled the nest, and the mother bird then took to roosting in an elder bush near by. Every evening she could be seen mustering her children, and then she would point out to them their places in the nest for the night, always giving them a good lecture before they went to sleep. "She appeared," he relates, "to count them over and over again, and did not close an eye until the little folk were fast asleep." She was always the first to awake, and

would then inspect her family, as they slept, with their heads beneath their wings. One by one they would wake up ; and while some were wide awake directly their eyes were opened, others would drop off to doze a little longer, just like drowsy children.

Birds which fly in flocks naturally have a good deal to say about going to roost before settling down.

Flocks of starlings make a grand fuss as bed-time draws near, and they fly to their roosting-place, a bed of reeds, or some wood or coppice. It is a wonderful sight, on a midsummer evening, to watch thousands of starlings seeking their roosting-place, and circling above it, with a rush of wings like a rising wind. All the birds of the flock rise, fall, twist, and circle as one, in perfect unison. When at last they settle, there arises their grand good-night chorus, made up of the strangest whistling, chattering, clattering sounds. But the flock may presently rise again as one, to go circling, soaring, and diving over the tree-tops, before finally settling for the night.

And at intervals through the night there comes from the restless flock a low whistling medley of song, suddenly arising and suddenly dying away, and the birds rustle amid the trees with a noise like a sudden shower of rain.

When there are eggs or young birds in a nest, it is an interesting little problem, Where do the parents sleep ? Often one of the parents sits on guard in the nest above its treasures, while the other roosts near by. Late one evening we watched a mother thrush guarding her young from a sudden rainstorm ; she crouched above them with her wings spread wide, forming a perfect umbrella.

Father rooks remain near their nests at night, while the mothers take charge of the contents ; but

if the weather is very stormy the fathers may seek trees with denser branches than the nest-trees, and there all roost together. When the young rooks are so big that they fill the nest the wives join the husbands to roost in a place apart.

There may be in a rookery some young birds who have not succeeded in finding mates. These will flock together to roost, and after the others have turned in for the night may be heard quarrelling, or perhaps revelling, and keeping, it is to be feared, disgracefully late hours.

Sparrows always make a great to-do before settling down for the night; they quarrel and bicker as a matter of course—and if one should come in to the roosting-place very late, some hard things are sure to be said to him for disturbing others. Sparrows keep their wits about them when asleep, and some are sure to make good their escape even when the stealthiest of sparrow-catchers uprear the deadly net against their roosting-place.

Most birds, if disturbed while asleep, give an indignant cry and take wing, but soon settle again, possibly at once returning to their chosen resting-place. Some sleep most heavily after feeding. Vultures that have gorged on a carcase fall into a lethargic state, to allow the food to be prepared and softened in the crop for digestion; and travellers tell how they will then even permit themselves to be taken in hand, though on becoming aware of danger they are alert enough. As if knowing that the heavy meal has deprived them of their wits, their first action often is to disgorge their food!

Some birds burst into song when disturbed from sleep, like the sedge-warbler, who roosts in reeds on the margin of water, or the merry-hearted little wren,

whose sudden song we have often heard from a hedge, when driving at night, the rumble of our wheels or the lights of our lamps having aroused him from his dreams.

But do birds dream? We think they do, like dogs and other animals. They will flutter uneasily in their sleep, and twitter, just as one would expect them to do if dreaming. The caged bird fluttering in its sleep may be dreaming, at the season of migration, of another land to which it would be flying if free. The bird that sings a little song in its sleep is dreaming perhaps of a fine feast off succulent insects, or, who knows? of love.



Bold when Nesting

"In the season of nesting the wildest birds are comparatively tame. Thus the ring-dove breeds in my fields, though they are continually frequented; and the missel-thrush, though most shy and wild in the autumn and winter, builds in my garden close to a walk where people are passing all day long."

Swallows

The swallow, though called the chimney-swallow, by no means builds altogether in chimneys, but often within barns and out-houses, against the rafters.

Five or six, or more feet down the chimney, does this little bird begin to form her nest, about the middle of May, which consists, like that of the house-martin, of a crust or shell composed of dirt or mud, mixed with short pieces of straw, to render it tough and permanent ; with this difference, that whereas the shell of the martin is nearly hemispheric, that of the swallow is open at the top, and like half a deep dish. This nest is lined with fine grasses and feathers, which are often collected as they float in the air.

The swallow lays from four to six white eggs, dotted with red specks ; and brings out her first brood about the last week in June, or the first week in July. First, they emerge from the shaft with difficulty enough, and often fall down into the rooms below. For a day or so they are fed on the chimney-top, and then are conducted to the dead leafless bough of some tree, where, sitting in a row, they are attended with great assiduity, and may then be called perchers. In a day or two more they become fliers, but are still unable to take their own food. Therefore, they play about near the place where the dams are hawking for flies ; and when a mouthful is collected, at a certain signal given, the dam and the nestling advance, rising towards each other, and meeting at an angle, the young one all the while uttering such a little quick note of gratitude and complacency, that a person must have paid very little regard to the wonders of Nature that has not often remarked this feat.

The dam betakes herself immediately to the business of a second brood as soon as she is disengaged from her first, which at once associates with the first broods of house-martins, and with them congregates, clustering on sunny roofs, towers, and trees. This swallow brings out her second brood towards the middle and end of August.

The swallow, probably the male bird, is the sentinel to house-martins and other little birds, announcing the approach of birds of prey; for as soon as an hawk appears, with a shrill alarming note he calls all the swallows and martins about him, who pursue in a body, and buffet and strike their enemy till they have driven him from the village, darting down from above on his back, and rising in a perpendicular line in perfect security. This bird also will sound the alarm and strike at cats when they climb on the roofs of houses, or otherwise approach the nests.

Each species of *hirundo* (swallow-tribe) drinks as it flies along, sipping the surface of the water; but the swallow alone, in general, washes on the wing, by dropping into a pool for many times together. In very hot weather, house-martins and bank-martins dip and wash a little.

The swallow is a delicate songster, and, in soft, sunny weather, sings both perching and flying; on trees in a kind of concert, and on chimney-tops.

Before they depart, for some weeks, to a bird they forsake houses and chimneys, and roost in trees, and usually withdraw about the beginning of October, though some few stragglers may appear on at times till the first week in November.—G. W.

The History of the Swallows

SINCE the days when these beautiful notes about swallows were written—in the year 1769—there have been many changes in swallow history.

There was an idea at that time, half believed in even by the great observer who so lovingly wrote the swallows' story, that these birds retired in winter to a sleeping-place, not leaving their summer home, but laying up in holes and caverns till spring came again. We all know now that they travel from our chimneys, roofs, and barns to distant winter quarters—to the groves of Italy and the palms of Africa, to the Nile Valley, even to the Cape, four thousand miles from home.

And then, swallows are by far less plentiful than of old. During some recent summers, everybody in the country has noticed the thinness of the swallow hosts. We know one downland village whose inhabitants remember the days when several hundred swallows would be reared under their eaves every summer, together with several hundred house-martins; but now one sees in that village only two or three pairs of swallows, and finds not twenty nests of swallows and martins, all told. Gilbert White observed a party of about four hundred martins flying about his church tower at Selborne one September day in 1791, beside

other parties at the same time in his village ; Selborne is not so favoured nowadays. One reason for the loss of our swallows and martins is the cruel slaughter

which has been going on for so long on the Continent, where these birds have been killed in thousands while migrating, for food and for the purposes of the milliner. Another reason is the great increase in the number of our sparrows, who persecute swallows and martins, and destroy or take possession of their nests.

In the old days the swallows seemed commonly to build in chimneys—there was in Gilbert White's time scarcely a single cottage chimney without its swallow—but chimneys are smaller now, and they prefer to build under the eaves ; we seldom hear them called chimney-swallows.

The introduction of telegraph wires throughout the land made another great difference to the life-story

of our swallows. In Gilbert White's day his swallows held their great autumnal assemblies on trees. To-day the swallows gather on the telegraph wires ; and if you take a long journey by any main road through England in September, you now see the swallows in separate



The fate of the early arrival

companies, small and large, lining the wires at brief intervals of every few miles.

In the old naturalist's time, in open down country, horsemen often would be attended by little parties of swallows, who followed them for miles together, sweeping round about the horses to pick up the insects stirred from the grass by their hoofs. We have often sat beside a shepherd on the brow of the South Downs watching the swallows sweeping, with the same intent, about the grazing sheep; and the shepherd has told us that he has more swallows, martins, and swifts to keep him company on a dull day than on a sunny one, for, if rain threatens, the insects hide among the grasses, and so the swallows gather where they are stirred up by the feet of the flock.



The sparrow in possession

Back and forth over the grazing sheep speed the birds, now flashing up the hill into our faces, then, with one beat of the wings, swooping sheer to the foot, a thousand feet below—twisting, rising, diving for hours together, making a most beautiful bird picture.

Except for the great autumnal gatherings of the

swallows on the telegraph wires, we do not see much of their migratory movements. They go, in the night, in October, as mysteriously as they come in April. Gilbert White relates how he saw something very like actual migration one Michaelmas Day. Travelling early through the morning fog, when some eight miles from the south coast he saw great numbers of swallows clustering on the stunted shrubs and bushes of a large heathland, as if they had roosted there all night. "As soon as the air became clear and pleasant, they all were on the wing at once ; and, by a placid and easy flight, proceeded southwards, towards the sea ; after this I did not see any more flocks, only now and then a straggler."



Field-Cricket

Field-cricket is so shy and cautious that it is no easy matter to get a sight of them ; for, feeling a person's footsteps as he advances, they stop short in the midst of their song, and retire backward nimbly into their burrows, where they lurk till all suspicion of danger is over.

Sitting in the entrance of their caverns, they chirp all night as well as day, from the middle of the month of May to the middle of July ; and in hot weather, when they are most vigorous, they make the hills echo ; and in the still hours of darkness, may be heard to a considerable distance. In the beginning of the season their notes are more faint and inward ; but become louder as the summer advances, and so die away again by degrees.

Sounds do not always give us pleasure according to their sweetness and melody ; nor do harsh sounds always displease. We are more apt to be captivated or disgusted with the associations which they promote than with the notes themselves. Thus the shrilling of the field-cricket, though sharp and stridulous, yet marvellously delights some hearers, filling their minds with a train of summer ideas of everything that is rural, verdurous, and joyous.

House-Cricket

While many other insects must be sought after in fields, and woods, and waters, the house-cricket resides altogether within our dwellings, intruding itself upon our notice whether we will or no. This species delights in new-built houses, being, like the spider, pleased with the moisture of the walls ; and, besides, the softness of the mortar enables them to burrow and mine between the joints of the bricks or stones, and to open communications from one room to another. They are particularly fond of kitchens and bakers' ovens, on account of their perpetual warmth.

Tender insects that live abroad either enjoy only the short period of one summer, or else doze away the cold uncomfortable months in profound slumbers ; but these, residing as it were in a torrid zone,

are always alert and merry ; a good Christmas fire is to them like the heats of the dog-days.

Mole- Cricket

While the field-cricket delights in sunny, dry banks, and the house-cricket rejoices amidst the glowing heat of the kitchen hearth or oven, the mole-cricket haunts moist meadows, and frequents the sides of ponds and banks of streams, performing all its functions in a swampy, wet soil. With a pair of forefeet curiously adapted to the purpose, it burrows and works underground like the mole, raising a ridge as it proceeds, but seldom throwing up hillocks.

In fine weather, about the middle of April, and just at the close of day, they begin to solace themselves with a low, dull, jarring note, continued for a long time without interruption, and not unlike the chattering of the fern-owl, or goat-sucker, but more inward.

G. W.

The Merry-Hearted Cricket

SOME places are favoured far more than others by the merry-hearted tribe of crickets, and the village of Selborne is especially thus favoured—never have we heard such cricket music as in the haunts of the old-time naturalist, whose ears were so charmed by the stridulous shrilling. Walking on a midsummer evening down the village street, you may hear crickets in every cottage; and the music they make is indeed in harmony with summer ideas, with “things rural, verdurous, and joyous.”

Gilbert White studied the crickets closely, and wrote at length about them; the few passages we have quoted are from three letters filled with intimate details of their lives.

Taking his spade in hand, he would go out to a dry pasture behind his house, haunted by field-crickets, to open their burrows, and draw out thence, with a pliant stalk of grass, the curious inhabitants—learning to distinguish the male, in his shining black, with the golden stripe across the shoulder, from the more dusky female, with the sword-shaped weapon at her tail, with which she deposits her eggs, and closely examining the eggs laid in the secret nurseries, and the ugly larvæ they produce. He noticed that though the field-crickets have long legs and brawny thighs for

leaping, like grasshoppers, yet when disturbed they only crawled along in a shiftless manner (though at times they can leap magnificently), and that when taken in hand they never offered to defend themselves with their strong, toothed jaws. It is the males only that make the chirping noise. On each forewing is a kind of file and drum, and the chirping is produced by the quick rubbing of one wing over the other.

In Gilbert White's day the housewife held many superstitious ideas about house-crickets; they foretold good luck or ill—the approach of an absent lover or the death of a relation; and when they were specially noisy their music was a sign of rain at hand.

In places where field-crickets abound, they seem sometimes to assemble to hold a music festival, and in hundreds raise the delicate, shrilling song, their musical humming filling the air. Their concerts they give in the early summer, but the house-cricket, living always in a warm, indoor climate, is ready to oblige with its chirping song all the year round.

Mole-crickets are not so abundant as field-crickets, for which farmers may be thankful, as these work great havoc when they attack growing crops. They are well named, as they live the burrowing life of the mole; their forelegs are much like those of the little gentleman in black velvet, while their strong claws and cylindrical bodies enable them to drive their way easily through soft ground.

Crickets are great fighters, and when two strong mole-crickets engage in a duel, it is woe to the vanquished, for as soon as he is beaten his corpse is devoured.

The life-story of this mole-like insect opens on a June day, when the mother cricket lays the egg from which it will presently develop. She lays in the month perhaps two hundred tiny yellow eggs, in a small hole

underground, to which a shaft leads from the surface. The nest is carefully guarded, and on any danger the mother cricket darts to her treasures. In two or three weeks the eggs hatch, and for three or four weeks the young remain in the nest; then burrowing in the ground, and, after moulting several times, dropping asleep for the winter. About a year after the egg is laid the perfect insect stage is reached, and another merry-hearted mole-cricket begins its career, for better or worse.

While it disturbs young plants by its burrowing, and eats roots, and bites off germinating shoots while underground, it does some good in the world by devouring underground grubs, more harmful than itself to the farmer and gardener.



A Belated Martin

“I once saw in Christ Church College quadrangle in Oxford, on a very sunny warm morning, a house-martin flying about and settling on the parapet so late as the 20th of November.”

Sparrow- Hawks

About the 10th of July, a pair of sparrow-hawks bred in an old crow's nest on a low beech in the hanger ; and as their brood, which was numerous, began to grow up, became so daring and ravenous, that they were a terror to all the dames in the village that had chickens or ducklings under their care.

A boy climbed the tree, and found the young so fledged that they all escaped from him, but discovered that a good house had been kept. The larder was well stored with provisions ; for he brought down a young blackbird, jay, and house-martin, all clean picked, and some half devoured.

The old birds had been observed to make sad havoc for some days among the new-flown swallows and martins, which, being but lately out of their nests, had not acquired those powers and command of wing that enable them, when more mature, to set such enemies at defiance.—G. W.

The Sparrow-Hawk's Larder

AFTER young sparrow-hawks can fly, their nest is used by the parent birds as a real larder. The young ones may leave the nest, to begin to learn their life's lessons, but return to feast on the supplies of fresh food which the parents bring home.

In another story of the sparrow-hawk's larder, the contents included fifteen young pheasants, four young partridges, five chickens, a bullfinch, two meadow-pipits, and two larks, all newly killed. This nest was in a thick oak tree; and a gamekeeper, by lying in wait underneath, was able to shoot the male hawk as he arrived back with a lark in his talons. The female he trapped, and eventually he shot, one after the other, the five young birds as they came back to the nest, uttering cries of hunger.

While the kestrel is a most useful bird, destroying insects and mice, the sparrow-hawk prefers to feed on birds—and on this account has been so persecuted by gamekeepers and farmers as to be now a rare bird in many parts. In consequence, farmers complain of plagues of sparrows and others, which the sparrow-hawk, if he had been spared, would have kept down. The kestrel soars and hovers aloft, but the sparrow-hawk's habit is to chase and skim along by hedges

and through woods, near to the ground, picking off small birds from the hedges.

The female is much larger than the male, several inches longer. She does her greatest damage to the interests of farmers and game-preservers when she has hungry young to feed. Nearly always sparrow-hawks nest in other birds' old homes. The four or five eggs laid are a bluish white, finely blotched with brown.

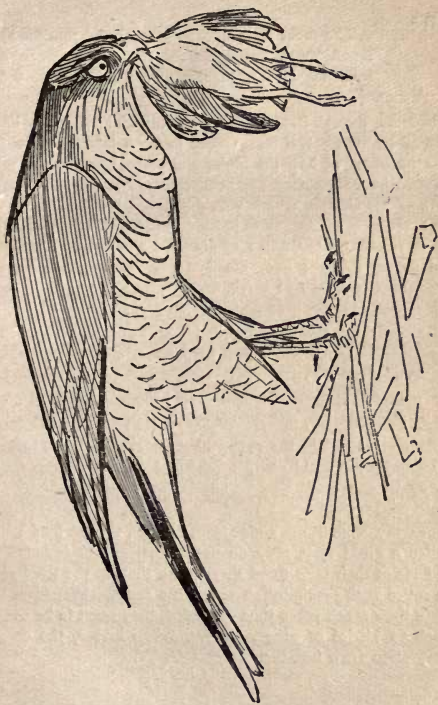
When chased by a sparrow-hawk, a terrified bird sometimes will fly straight to a human being, or to the door of a house, as if for protection. Once, by the seaside, a kingfisher flew to a rock on which we were standing, crouching at our feet, while a sparrow-hawk dashed after him in pursuit, but was met, as he came over the sea, by a gull, who gallantly attacked him, and drove him off after a long chase.

Then there are many stories like that of a gardener who was quietly watering plants in the greenhouse when a blackbird flew frantically in through the door, taking refuge between his legs, while at the same moment there was a crash of glass, and a sparrow-hawk, which had been swooping on the blackbird, fell dead at the gardener's feet.



Departing Guests

"How strange it is that the swift, which seems to live exactly the same life with the swallow and house-martin, should leave us before the middle of August invariably!—while the latter stay often till the middle of October; and once I saw numbers of house-martins on the 7th of November. The martins and redwing field-fares were flying in sight together; an uncommon assemblage of summer and winter birds!"



The sparrow-hawk replenishing his lair

Worms

The most insignificant insects and reptiles are of much more consequence, and have much more influence in the economy of Nature, than the in-curious are aware of.

Earthworms, though in appearance a small and despicable link in the chain of Nature, yet, if lost, would make a lamentable chasm. For to say nothing of half the birds, and some quadrupeds, which are almost entirely supported by them, worms seem to be the great promoters of vegetation, which would proceed but lamely without them, by boring, perforating, and loosening the soil, and rendering it pervious to rains and the fibres of plants, by drawing straws and stalks of leaves into it; and, most of all, by throwing up such infinite numbers of lumps of earth, called worm-casts, which being their excrement, is a fine manure for grain and grass.

Worms probably provide new soils for hills and slopes where the rain washes the earth away; and they affect slopes, probably to avoid being flooded. . . .

The earth without worms would soon become cold, hard-bound, and void of fermentation, and consequently sterile.

Worms work most in the spring, but by no means lie torpid in the dead months; are out every mild night in the winter, as any person may be convinced that will take the pains to examine his grass plots with a candle.

When earthworms lie out a-nights on the turf, though they extend their bodies a great way, they do not quite leave their holes, but keep the ends of their tails fixed therein, so that on the least alarm they can retire with precipitation under the earth. Whatever food falls within their reach when thus extended, they seem to be content with—such as blades of grass, straws, fallen leaves, the ends of which they often draw into their holes.—G. W.

The Plough we call a Worm

THE earthworm is Nature's own plough. Though the plough is almost the oldest of man's inventions in use to-day, it can never accomplish the work of worms, for they not only plough, but they create soil as they tunnel their way, by eating, through the ground, they grind small the particles of rock, dragging down leaves and straws and the corpses of dead beetles to enrich the earth, and throwing up as castings the fine, valuable mould which has passed through their bodies. If there were no worms, we must suppose there would be no fertile soil on the surface of the earth, and therefore no vegetation.

Gilbert White, in his great wisdom, recognised the worth of the lowly worm. But in his great humbleness he described his discoveries of that worth only as hints which perchance might "set the inquisitive and discerning at work." He remarked that a good monograph on worms would open a large and new field in natural history. This he wrote in the year 1777. More than a hundred years passed—and then, in the year 1881, one of the most inquisitive and most discerning of all men who ever lived—Charles Darwin—published the monograph asked for so long before, one which made the whole world see the truth of what Gilbert White had proclaimed, that worms, of all creatures, have played almost the most important part in the history of the world.

Every particle of soil in your garden, the soil which yields you flowers and fruits, and a smooth, grassy lawn, has passed through the bodies of worms; otherwise there would be no fruit or flowers, and no green lawns. When you look at some great expanse of velvet-soft turf, the smooth greensward of a park, or a plain on the hills, it is marvellous to think of what Darwin tells us, that its beauty is due to the work of the despised worms who have razed away the inequalities. The whole of the superficial mould you see has passed, and will pass again, every few years, through the bodies of worms.

Eating their way about the underworld, worms break up the soil, to let in the rain, to let in the sunshine, so that it may sweeten the earth and destroy the harmful germs, and to allow the tender plants to make an easy passage out to the light. They work it as with a plough, by turning the soil over. How they must enrich the soil by the leaves they bury you may judge, in the autumn, when you commonly see little collections of leaves sticking out from the ground, these having been partly pulled down by the unseen and silent workers.

In one acre of good ground there are thousands upon thousands of worms—fifty thousand, perhaps—and each one is working to make the ground rich and fertile. It is calculated that these worms of one acre often pass ten tons of soil through their bodies in a year, covering the surface with soil at the rate of three inches in fifteen years.

So we must learn to respect the lowly, ugly earthworm—the plough that ploughed the earth before man had been called into the world, and has been ploughing ever since.

A Tragedy of the Eaves

"I have just met with a circumstance respecting swifts, which furnishes an exception to the whole tenor of my observations ever since I have bestowed any attention on that species.

Our swifts, in general, withdrew this year about the first day of August, all save one pair, which in two or three days was reduced to a single bird. The perseverance of this individual made me suspect that the strongest of motives, that of an attachment to her young, could alone occasion so late a stay. I watched therefore till the twenty-fourth of August, and then discovered that, under the eaves of the church, she attended upon two young, which were fledged, and now put out their white chins from a crevice.

These remained till the twenty-seventh, looking more alert every day, and seeming to long to be on the wing. After this day they were missing at once; nor could I ever observe them with their dam coursing round the church in the act of learning to fly, as the first broods evidently do.

On the thirty-first I caused the eaves to be searched, but we found in the nest only two callow, dead, stinking swifts, on which a second nest had been formed.

Though it may be disagreeable to swifts to remain beyond the beginning of August, yet that they can subsist longer is undeniable. This uncommon event, as it was owing to the loss of the first brood, corroborates my former remark, that swifts breed regularly but once; since, was the contrary the case, the occurrence above could neither be new nor rare."

Cats

There is a propensity belonging to common house cats that is very remarkable : I mean their violent fondness for fish, which appears to be their most favourite food. And yet nature, in this instance, seems to have planted in them an appetite that, unassisted, they know not how to gratify. For, of all quadrupeds, cats are the least disposed towards water ; and will not, when they can avoid it, deign to wet a foot, much less to plunge into that element.—G. W.

Why should Cats like Fish?

MANY great minds have puzzled over this question—
Why should cats like fish?

We must remember that the ancestors of our hearth-side pussy were wild cats of the jungle. Some of their wild instincts yet remain in the sleek person of our household pet.

See how she crouches when she watches a bird—how her tail lashes—how her jaws champ in excitement—how she rushes up a tree with the speed and ease of a squirrel—and how she sits perfectly still over



"Do we like fish? Doesn't this look like it?"

a mouse-hole, like a graven image of a cat, for many hours a day, day after day, waiting with infinite patience for the mice to come out. So crouched, and sprang, and waited her wild cat ancestors. And she is half wild still, though she seems wholly tame.

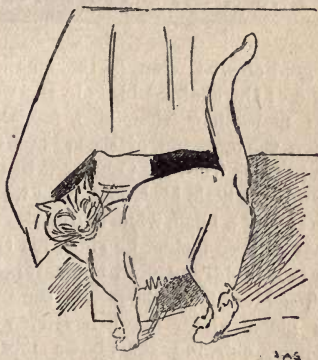
When it has been pointed out (as by Darwin) we may observe that different cats show great differences in their natural instincts. One cat catches rats, not mice; another takes mice, not rats. One brings home birds, another rabbits. One there was who hunted marshes at night, and almost nightly caught woodcock and snipe. Darwin urged that those cats which preferred to catch rats rather than mice had ancestors who likewise preferred rats—and so inherited the taste.

Now and again one hears of a cat which knows how to fish, though it is true that few can catch fish or care to brave water.

Some cats, which like to keep their feet dry, have taken to fishing from a bank in shallow water. Others will dart on to trout lying in deep clear water. One cat that lived in old days at Carshalton, in Surrey, would plunge without hesitation into the River Wandle, and swim over to an island, first for the sake of the fish she saw on the way, and then for the vermin of the island.

Another famous case was that of a cat, a household favourite, which lived near Caverton Mill, in Roxburghshire, and was very fond of fish and fishing. When the mill stopped, only shallow water ran over the dam, leaving the trout in difficulties. So well did the cat know this, that the moment the noise of the mill-clapper ceased, she would scamper to the dam and run into the water, "to catch fish," it is related, "like an otter."

This has been quoted as a curious case of animal instinct approaching to reason, and overcoming the usual habits of the animal. But we may think of it as an old instinct brought to new life if we suppose that wild cats, in past days, braved water to catch fish for a living. Perhaps if they were given the chance most cats would show that they are still good fishermen at heart !



Fish for breakfast !

This morning I saw the golden-crowned wren, whose crown glitters like burnished gold. It often hangs like a titmouse, with its back downwards.—G. W.

The Fairy Goldcrest

THE little gold-crested wren is the smallest bird in Europe—one of the choicest birds in the world.

It seems marvellous that this fairy-like midget should brave the crossing of seas; but numbers of them come in to us from the Continent in the autumn.

This is a gallant little bird, and often we may watch him on one side of a bush, while two or three feet away, on the other side or inside, he sings his tiny tinkling song—just two rapidly uttered notes, repeated.

The cock goldcrest will hover, in the nesting-time, above the place where his hen sits, with quickly beating wings, chirping sharply—a most charming little dance in the air.

The dainty nest is suspended beneath the branch of a yew or fir, woven of leaves, moss, and webs, lined with feathers. The little eggs are whitish, spotted at the larger end with reddish brown—very delicate and fragile.

So light and small are the birds that there may be ten young ones in the frail, swinging cradle.



Jack Screacher gives a solo

Swifts

The swift, like the sand-martin, is very defective in architecture, making no crust, or shell for its nest, but forming it of dry grasses and feathers, very rudely put together.

In general, they haunt tall buildings, churches, and steeples, and breed only in such; yet, in this village, some pairs frequent the lowest and meanest cottages, and educate their young under those thatched roofs. As they must stoop very low to get up under these humble eaves, cats lie in wait, and sometimes catch them on the wing.

As the swift eats, drinks, and collects materials for its nest on the wing, it appears to live more in the air than any other bird.

It is a most alert bird, rising very early, and retiring to roost very late, and is on the wing in the height of summer at least sixteen hours. In the longest days it does not withdraw to rest till a quarter before nine in the evening, being the latest of all day birds.

Just before they retire, whole groups of them assemble high in the air, and squeak and shoot about with wonderful rapidity. But this bird is never so much alive as in sultry thundery weather, when it expresses great alacrity, and calls forth all its powers. In hot mornings several getting together into little parties dash round the

steeple and churches, squeaking as they go in a very clamorous manner : these, by nice observers, are supposed to be males serenading their sitting hens, and not without reason, since they seldom squeak till they come close to the walls or eaves, and since those within utter at the same time a little inward note of complacency.

When the hen has sat hard all day, she rushes forth just as it is almost dark, and stretches and relieves her weary limbs, and snatches a scanty meal for a few minutes, and then returns to her duty of incubation.

They bring out their young about the middle or latter end of July ; but as these never become perchers, nor, that ever I could discern, are fed on the wing by their dams, the coming forth of the young is not so notorious as in the other species.

Sometimes they pursue and strike at hawks that come in their way, but not with that vehemence and fury that swallows express on the same occasion.

But in nothing are swifts more singular than in their early retreat. They retire, as to the main body of them, by the 10th of August, and sometimes a few days sooner ; and every straggler invariably withdraws by the 20th. This early retreat is mysterious and wonderful, since that time is often the sweetest season in the year.

Swifts are no songsters, and have only one harsh screaming note ; yet there are ears to which it is not displeasing, from an agreeable association of ideas, since that note never occurs but in the most lovely summer weather.

They never settle on the ground but through accident, and when down can hardly rise, on account of the shortness of their legs and the length of their wings : neither can they walk, but only crawl ; but they have a strong grasp with their feet, by which they cling to walls.—G. W.

The Screecher

THE sooty black swift, with his scythe-shaped wings, is often called by countryfolk the "screecher," from his harsh note, that wild scream heard as he races with others through the air.

He is a favourite with country people, and many a humble cottage makes him welcome to its eaves. To the old home he returns with great regularity year after year early in May, the exact date usually only varying by a day or two, according to the weather. And should he come no more, he is hardly missed, as his descendants come in his place to carry on the old tradition of the home.

In a little downland village in Sussex, associated with Alfred the Great, an old cottager has harboured some six pairs of swifts under the eaves through sixty summers and more, and likes to think that his swifts are the descendants of those who went swooping through the hamlet when Alfred the Great was its lord of the manor.

It might seem surprising that if one family of swifts is faithful, generation after generation, to one place, their numbers should not increase appreciably—that if there are six nests one year there should only be six the next year. Swifts, one would say, have few enemies, living as they do always in the air, except

when sleeping or hatching their eggs, and being able to outfly all our birds. Their families are small, each pair laying only two eggs in a season ; and we usually



Old friends—the wanderer's return

find in nature that where families are small the death-rate is low.

But our swifts lead lives at high pressure, for ever flying recklessly at terrific speed, and death no doubt

claims many victims from their impetuous energy. More than once we have picked up the dead bodies of swifts who have dashed themselves to pieces in their headlong flight.

A story is told by a naturalist of how he wished to procure a swift for scientific examination. While he was selecting a bird, from a wheeling pack, to be a martyr to science, and was about to shoot, two of the others, flying from opposite directions, met, head on, and with such force that one dropped dead, thus allowing the naturalist to take a dead swift in hand without deliberately taking life.

Swifts suffer much from cold when it greets them on their arrival in this country, and if there should be a cold spell in August, it is sure to take heavy toll. A very wet spring may mean that their eggs do not hatch ; others in that case would be laid, and perhaps through being hatched late the young birds cannot thrive. On these and other accounts we do not find an increase in the numbers of our swifts—rather, alas, a decrease.



A Heaven-sent Dish of Turnips

“One of my neighbours shot a ring-dove [or wood-pigeon] on an evening as it was returning from feed and going to roost. When his wife had picked and drawn it, she found its craw [or crop] stuffed with the most nice and tender tops of turnips. These she washed and boiled, and so sat down to a choice and delicate plate of greens, culled and provided in this extraordinary manner.”

Harvest Mice

They never enter into houses ; are carried into ricks and barns with the sheaves ; abound in harvest ; and build their nests amidst the straws of the corn above the ground, and sometimes in thistles. They breed as many as eight in a litter, in a little round nest composed of the blades of grass or wheat.

One of these nests I procured this autumn, most artificially plaited, and composed of blades of wheat ; perfectly round, and about the size of a cricket-ball ; with the aperture so ingeniously closed, that there was no discovering to what part it belonged. It was so compact and well filled that it would roll across the table without being discomposed, though it contained eight little mice that were naked and blind.

As this nest was perfectly full, how could the dam come to her litter respectively, so as to administer a teat to each ? Perhaps she opens different places for that purpose, adjusting them again when the business is over ; but she could not possibly be contained herself in the ball with her young, which, moreover, would be daily increasing in bulk.

This wonderful cradle, an elegant instance of the efforts of instinct, was found in a wheat-field suspended in the head of a thistle.

G. W.

Mice and Men

THESE simple words about the harvest mouse have a great importance and interest, for they were hailed, when written, as being the first announcement of a surprising discovery, nothing less than a new quadruped in Hampshire, then supposed to be the smallest of them all—but the lesser shrew has now robbed the little harvest mouse of that distinction.

He is a tiny, reddish-brown mouse, white beneath, so light that it takes two to weigh down a halfpenny in the scale. He is very sociable, and crowds are found together in the stacks, and may be picked up in handfuls.

It is one of the prettiest sights of the cornfield to watch this fairy-light creature nimbly running up a corn-stalk to feed on the grain within the ear, to see how he clings to the stalk with his little hand-like feet, and how when he comes down he uses his tail as a grasping instrument. We have no other animal that can grasp with its tail like the harvest mouse.

And it is always a delight to find the wonderful nest, supported at a little height above the ground, by three or four corn-stalks, or built of split leaves of reeds, or of dry grass-blades, and set up in a tuft of coarse grass ; sometimes we find the nest in a standing corn-stack. It is always interesting to puzzle over

the question how the mother mouse enters the nest to tend her young, as no inlet is to be seen.

Harvest mice make the most amusing pets, far more interesting than the dormouse, which is so given



Lesser Shrew: "I am the smallest of them all!"

to sleep. If in a cage they are allowed stalks to climb about on, they give the prettiest acrobatic performances. It is charming to see them sitting up on hind feet, looking about, and how, after lapping water, they gracefully sit up to clean their faces with their paws.

They soon grow familiar with those who are their friends.

There are many pretty animal pictures known to all who watch wild life—pictures of the squirrel sitting on his haunches to nibble a nut held in his fore-paws ; of little furry fox-cubs gambolling round and round a tree-trunk ; of a mother stoat carrying her young by the scruff of the neck ; of rabbits sitting bolt upright at attention ; of hares engaged in a boxing match, or crouching motionless in their forms, ears laid back and pressed flat, beneath one's very feet.

But this picture of a mouse, dormouse or any other, sitting up to wash its face, ranks among the prettiest of all.

It is always a triumph of woodcraft to be able to stay so still that mice, who take alarm so quickly, have no fear at the sight of you, but go rustling all about you as you lie quiet in a wood, or run towards you as you stand, as still as a statue, on a road by a cornfield.

So it is a triumph when an inquisitive squirrel comes slowly, head first, down a tree-trunk, and hops towards you, as if he cannot make out whether you are alive or dead.

And you can never afterwards forget the first time when, sitting still by the verge of a river, in the gloaming, you catch sight of an otter fishing, diving, or teaching its young to swim.

It is not unusual for a field-mouse to come creeping close up to a man who has mastered the art of standing perfectly motionless ; the mouse will perhaps run over the man's boots.

Let the slightest movement be made, and away darts the little thing—ever on the alert to save its skin.

But a field-mouse is easily captured, and, like other

mice, is well worth taking gently in hand, so that its large eyes and beautiful fur may be examined at close quarters.

When bird's-nesting in the summer, we have sometimes found a dormouse's nest in a bush, and by standing still have been rewarded by the sight of a little brown head peeping out at us, or of seeing how nimbly the mice run up the bush and enter their round home, at once their castle and their nursery—so slight and light, yet so firm and strong.



Harvest Mouse: "I alone have a prehensile tail!"

The Evensong of the Rooks

“The evening proceedings and manœuvres of the rooks are curious and amusing in the autumn.

Just before dusk they return in long strings from the foraging of the day, and wheel round in the air, and sport and dive in a playful manner, all the while exerting their voices, and making a loud cawing, which, being blended and softened by distance, becomes a confused noise or chiding; or rather a pleasing murmur, very engaging to the imagination, and not unlike the cry of a pack of hounds in hollow, echoing woods, or the rushing of the wind in tall trees, or the tumbling of the tide upon a pebbly shore.

When this ceremony is over, with the last gleam of day, they retire for the night to the deep woods.

We remember a little girl who, as she was going to bed, used to remark that the rooks were saying their prayers; and yet this child was much too young to be aware that the scriptures have said of the Deity—that ‘he feedeth the ravens who call upon him.’”

Gossa- mer

On September the 21st, 1741, being then on a visit, and intent on field diversions, I rose before day-break: when I came into the enclosures, I found the stubbles and clover-grounds matted all over with a thick coat of cobweb, in the meshes of which a copious and heavy dew hung so plentifully that the whole face of the country seemed, as it were, covered with two or three setting-nets drawn one over another. When the dogs attempted to hunt, their eyes were so blinded and hoodwinked that they could not proceed, but were obliged to lie down and scrape the incumbrances from their faces with their fore-feet; so that, finding my sport interrupted, I returned home, musing in my mind on the oddness of the occurrence.

As the morning advanced the sun became bright and warm, and the day turned out one of those most lovely ones which no season but the autumn produces; cloudless, calm, serene, and worthy of the South of France itself.

About nine, an appearance very unusual began to demand our attention—a shower of cobwebs falling from very elevated regions, and continuing, without any interruption, till the close of the day.

These webs are not single filmy threads, floating in the air in all directions, but perfect flakes or rags; some near an inch broad, and five or six long, which fell with a degree of velocity, that showed they were considerably heavier than the atmosphere.

On every side, as the observer turned his eyes, might he behold a continual succession of fresh flakes falling into his sight, and twinkling like stars as they turned their sides towards the sun.

How far this wonderful shower extended would be difficult to say; but we know that it reached Bradley, Selborne, and Alresford, three places which lie in a sort of triangle, the shortest of whose sides is about eight miles in extent.—G. W.

When Spiders go Sailing

IN autumn and winter, on clear calm days, we may chance to see the gossamer-spiders setting sail on their gossamer-threads ; and we may see these little silken threads floating in the air, and falling in showers, to be caught up on the hedgerows, and to cover the stubble-fields as with nets—silken nets which catch and hold the dew, so that when the sun shines on them the dew-drops glitter like diamonds.

How do we account for this riddle of gossamer ?

For some reason young and very small spiders feel in late summer a spirit of restlessness, and a longing to migrate, and by emitting the silken threads as sails they are able to voyage away through the air to fresh hunting-grounds. The flight of the young spiders may be due to the need of a general dispersal of the families, if there is to be food for all. Food is plentiful when the young spiders first begin learning to hunt for themselves ; as winter draws near the instinct to migrate takes hold of the spiders, as of the birds.

On a bright, still autumn day tens of thousands of tiny spiders, congregated in one place, set off on a journey to unknown destinations. They begin by climbing, and may be seen on every hand mounting points of vantage whence they can set sail—climbing up tall stalks of grasses and weeds, gate-posts, and stones. Arrived at the top, each little spider rears

itself on tip-toe, and from its spinneret emits a silken thread. This floats out on the air-current horizontally—a thread so fine that we can only see it when wet and in sunlight. The spiders cling fast to their points of vantage until the air-currents cause the threads to begin to pull—they will float, of course, on the very softest breath of air. The threads pull, and then each little spider vaults into space.

They can sail only where the air carries them. They may rise perhaps several hundred feet high; they may go too high, or perhaps too far, being sometimes borne out to sea. But as they go they can set more sail if they please, by emitting more silk, or perhaps they withdraw part of the parachute until they begin to sink to earth.



Blind Instincts

“Birds in general are wise in their choice of situation [when nesting], but in this neighbourhood, every summer, is seen a strong proof to the contrary, at an house without eaves, in an exposed district, where some martins build, year by year, in the corners of the windows.

But as the corners of these windows (which face to the south-east and south-west) are too shallow, the nests are washed down every hard rain; and yet these birds drudge on to no purpose, from summer to summer, without changing their aspect or house.

It is a piteous sight to see them labouring when half their nest is washed away.

Thus is instinct a most wonderfully unequal faculty; in some instances so much above reason; in other respects, so far below it!”

As a neighbour was lately ploughing in a dry chalky field, far removed from any water, he turned out a water-rat, that was curiously laid up in a retreat artificially formed of grass and leaves.

At one end of the burrow lay above a gallon of potatoes regularly stowed, on which it was to have supported itself for the winter.

But the difficulty with me is how this rat came to fix its winter station at such a distance from the water.

Was it determined in its choice of that place by the mere accident of finding the potatoes which were planted there; or is it the constant practice of the aquatic rat to forsake the neighbourhood of the water in the colder months?—G. W.

A Rat's Larder

RATS are not very particular either as to where they live, or what they eat.

They are at home nearly everywhere, by water, in burrows far from water, in ships and in buildings—and eat nearly anything—animal and vegetable, eggs, birds, young rabbits, and a vast amount of grain.

Finding life so easy, it is small wonder that rats increase and multiply. We have seen a ferret turn out a family of twelve young ones from a hole in a bank.

The mother rat always makes a snug nursery for her young, softly and warmly lined, perhaps with wool, or feathers. In about a week the young rats, which are born naked and blind, are covered with hair, and in about a fortnight their eyes open. At five weeks old they can shift for themselves in the world: and when about six months old it is quite possible that they will become parents themselves.

A full-grown pair of rats will have young several times in a year.

Nut- Eaters

There are three creatures—the squirrel, the field-mouse, and the nuthatch—which live much on hazel-nuts, and yet they open them each in a different way. The first, after rasping off the small end, splits the shell into two with his long fore-teeth, as a man does with his knife; the second nibbles a hole with his teeth, so regular as if drilled with a wimble, and yet so small that one would wonder how the kernel can be extracted through it; while the last picks an irregular ragged hole with its bill. But as this artist has no paws to hold the nut firm while he pierces it, like an adroit workman, he fixes it as it were in a vice, in some cleft of a tree, or in some crevice, when, standing over it, he perforates the stubborn shell.

We have often placed nuts in the chink of a gate-post, where nut-hatches have been known to haunt, and have always found that those birds have readily penetrated them. While at work they make a rapping noise that may be heard at a considerable distance.

G. W.

Lovers of Nuts

WHO loves a nut most, a squirrel, a mouse, a nuthatch, or—a boy? We are inclined to give the first place among the great lovers of nuts to that strange, beautiful, and amusing bird, the nuthatch, called of old, nut-jobber.

You know a nuthatch when you see a prettily coloured bird, slate-blue above and buff beneath, with dark stripes running back from the eyes, and a short, strong tail. The bird is peculiarly shaped, and the way the head is carried and the effect of the eye-stripes make him appear as if he tapers away from body to beak, in wedge-like form. He runs about trees with marvellous agility, running down a stem head first as easily as he mounts up. He has a most melodious whistle, heard through autumn and winter as well as in spring-time. His call is a sweet, clear “twee-twee, twee-twee,” and there is a more song-like call, one ringing, high note, also suggested by the word “twee,” repeated rapidly eight or nine times. There is a sound in his notes as of water gurgling from a narrow-necked bottle.

Above all food he loves nuts. We are sure that no boy could match the industry of the nuthatch in finding, carrying away, cracking, and eating or hiding nuts; when he has the chance he will thus occupy

himself from dawn till dusk with tireless zeal. We made a little experiment to test how many nuts a single pair of these birds who live in our garden would fetch, carry, crack, or hide in a day, and the total amounted to nearly four hundred. Never once through a long day spent in fetching and carrying nuts did their energy flag.

Sometimes we have put out on our bird-table a heap made up of many different kinds of food, mixtures of seeds and nuts such as are prepared for parrots, mixtures of chicken and cage-bird foods, with bread, meat, and suet—all manner of delicacies such as birds love—and have hidden among this goodly feast a few hazel or Spanish nuts. Then we have found that when the nuthatches arrive at the board, their first thought is to take the nuts before anything. Maize, wheat, hemp, sunflower seeds, the kernels of foreign nuts, breadcrumbs and suet—these and all the goodies they neglect while a nut remains, although they are as willing to eat bread as sparrows, and will take many kinds of seeds when the nuts are gone.

Unless a nut is wedged fast, as in a crevice of the bark of an old tree, the nuthatch usually picks it up in his beak, after a few swift pecks to put it in the convenient position, and flies off with it, to wedge it in a vice of his own choosing, where he may break it open with his bill and devour the kernel. Or if he comes across a goodly supply of nuts, he proceeds to fly off with them one by one, to drop them in various odd corners and holes of a garden or other hiding-places. Some he will deliberately plant in a border, or among shoots of plants or deep in tufts of grass. First he puts down the nut on a soft spot, then rains upon it a shower of blows with his bill, afterwards actually taking up in his bill little lumps of earth

wherewith to cover his treasure. Probably he forgets all about many of his hiding-places.

It is amusing to watch how he opens a nut. Usually he likes to wedge it in a crevice of rough bark point upwards. Then, standing over it, he rapidly taps away at the apex with his strong beak, until the nut splits. The body sways back and forth as the taps are delivered. The rapping noise made often is mistaken for a woodpecker's work. Sometimes the opening is ragged, but often a perfectly clean section is taken out of one side of the nut at the top. If the nut should be a bad one, the nuthatch soon finds this out; after a few sharp taps, which perhaps pierce a small hole, the nut is abandoned. You may often find the remains of shells opened by nuthatches in the crevices of old rugged oaks.

Where nuthatches haunt a neighbourhood, they are easily lured to a garden if nuts are set up to tempt them; by regularly supplying nuts we have kept a pair in our garden day after day for a year on end.

"My countrymen," wrote Gilbert White in another passage, "talk much of a bird that makes a clatter with its bill against a dead bough or some old pales [or pailings], calling it a jar-bird. I procured one to be shot in the



The Nuthatch : "Who said nuts?"

very fact; it proved to be the nuthatch. This noise may be heard a furlong or more."

It is surprising how few country people know anything about nuthatches, though in places where they are abundant they are so easily attracted to gardens and kept at home.

Whereas the little tree-creeper, when hunting for insects in a tree, always works his way upwards, the nuthatch runs as nimbly head first down a tree-stem as he runs up, and like a tree-creeper or a tit will cling upside-down to the under side of a branch.

The nest is in a hole in a tree, often in a woodpecker's old nest-hole, known to be a nuthatch's retreat by the plastering of mud around the opening. They are as clever at using their bills as a trowel for plastering, as for a hatchet, for breaking open nuts. By putting clay about the opening of a woodpecker's hole, they reduce the size of it to suit their own ideas of fitness, make it secure from draught, and go far to make the hole burglar-proof.

When nuthatches have nested in our garden in nesting-boxes, they have always taken the precaution of sealing down the lids of the boxes by putting a lining of clay inside where the lids open. The nest consists of chips of bark, apple-tree or fir bark, or chips of fir-cones, making a dry, warm bed whereon some five white, red-spotted, glossy eggs are laid.

While the squirrel is a great lover of nuts, we doubt if he seeks, attacks, and stores them with quite the same intensity of purpose as the nuthatch. He never seems to be in deadly earnest, the merry-hearted squirrel. Even when it is the time of hibernation, and he curls round for his winter sleep, he continually wakes up to take a scamper about on dry sunny days.

Besides hazel-nuts, he has the choice of a great variety of food, especially in summer and autumn. In autumn and early winter he spends long hours of a day scampering about, in his frolicsome way, under beech trees, eating and hiding beech-mast. Then he is a devoted lover of acorns, and the seeds of spruce. All kinds of other seeds attract him: he delights in the fruits of



Squirrel: "This nut is all for me."—

hornbeam, maple, and mountain ash; from gardens he takes walnuts and perhaps apples or strawberries; he gnaws the bark of trees when hard pressed, and eats succulent buds and shoots of such trees as spruce, Scotch pine, or chestnut. And sometimes he takes birds' eggs, and often beetles and the grubs of saw-flies and such insects.

It is one of the prettiest sights of the woods to

watch a squirrel sitting up on his haunches, grasping a nut in his little front paws, and holding it to his mouth as he gnaws away an opening. Mice gnaw a similar kind of hole. You could not mistake a nut opened by a mouse for one opened by a nuthatch, for you can



—“Ugh! There's a weevil in it!”

see the little teeth-marks of the mouse all round the edge of the opening.

Another lover of nuts there is whose work is known at once—the nut-weevil. When you find an almost empty nutshell with a minute round hole you know the nut-weevil has emerged therefrom. He is the neatest of all artists in opening nuts, and by his work causes many disappointments to nuthatches.

The nut-weevil is the larva, or maggot, of a black

beetle. When in early summer the hazel-nut is still green, this beetle pierces the shell with its proboscis, making a needle-like hole in which an egg is laid. When the egg develops in due time into a maggot, this little lump of flesh proceeds to devour the kernel of the nut. Presently, in autumn, when he has eaten perhaps only half the kernel, the nut falls to the ground. Then the maggot begins to gnaw the shell. He makes a clean, perfectly round, very small hole, and creeps out, to bury himself in the earth, where he remains through the winter, undergoing the transformation by which he becomes, in the following summer, a perfect black beetle himself.

When in the summer you see tits attacking green hazel-nuts, you may know that they are after the weevils destroying the nuts. The great tit also is fond of hazel-nuts when they are ripe.



The Cat that Brought up Squirrels

"A boy has taken three little young squirrels in their nest, or drey, as it is called in these parts. These small creatures he put under the care of a cat who had lately lost her kittens, and finds that she nurses and suckles them with the same assiduity and affection as if they were her own offspring.

So many people went to see the little squirrels suckled by a cat that the foster-mother became jealous of her charge, and in pain for their safety, and therefore hid them over the ceiling, where one died. This circumstance shows her affection for these foundlings, and that she supposed the squirrels to be her own young. Thus hens, when they have hatched ducklings, are equally attached to them as if they were their own chickens."

Linnets

We have, in the winter, vast flocks of the common linnets, more, I think, than can be bred in any one district.

These, I observe, when the spring advances, assemble on some tree in the sunshine, and join all in a gentle sort of chirping, as if they were about to break up their winter quarters, and betake themselves to their proper summer homes.

It is well known, at least, that the swallows and the fieldfares do congregate with a gentle twittering before they make their respective departures.—G. W.

The Linnets' Concert

IN autumn the linnets flock together, and go dipping across the fields with sharp, twittering calls, searching for seeds, in the evening gathering on a hedge to sing in chorus before going to roost.

This evensong of the linnets is heard until the spring, when the flocks break up—although the linnets continue to keep more or less in company in their favourite nesting-place, a furze-covered common. We have a record of the finding of more than one hundred of their nests one afternoon on a linnet-favoured golf-course.

In nesting days, the cock linnet's head becomes touched with crimson, and his little breast takes on a lovely carmine hue, though different birds vary much in colouring. In the nest are four or five dainty bluish-white eggs, speckled with reddish brown.

We love best to watch the linnets on a hot summer afternoon, when they come up from the great valleys of the South Downs to drink at a dew-pond on the brow of the hill. In small parties they drift in the livelong afternoon, twenty perhaps drinking together—and always their coming is heralded by the eager, sweet linnet twitter, and never does any linnet fly away after sipping refreshment without a note of thanksgiving.

Timothy the Tortoise

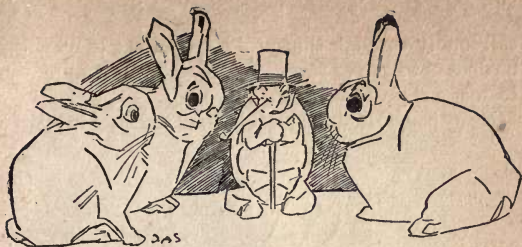
A land tortoise, which has been kept for thirty years in a little walled court belonging to the house where I am now visiting, retires underground about the middle of November, and comes forth again about the middle of April.

When it first appears in the spring, it discovers very little inclination towards food, but in the height of summer grows voracious, and then, as the summer declines, its appetite declines ; so that for the last six weeks in autumn it hardly eats at all.

Milky plants, such as lettuces, dandelions, sow-thistles, are its favourite dish.

In a neighbouring village one was kept till, by tradition, it was supposed to be an hundred years old—an instance of vast longevity in such a poor reptile !

No part of its behaviour ever struck me more than the extreme timidity it always expresses with regard to rain ; for though it has a shell that would secure it against the wheel of a loaded cart, yet does it discover as much solicitude about rain as a lady dressed in all her best attire—shuffling away on the first sprinklings, and running its head up in a corner. If attended to, it becomes an excellent weather-glass ; for as sure as it walks elate, and, as it were, on tiptoe, feeding with great earnestness in a morning, so sure will it rain before night.—G. W.



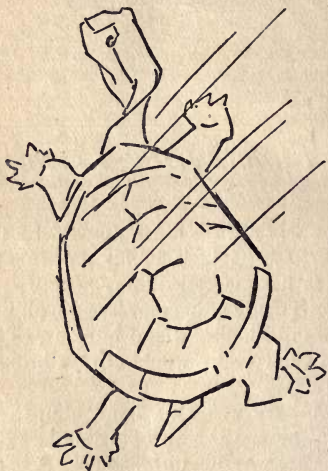
Timothy the Tortoise

MR. WHITE was always much amused by the ways of the pet tortoise he kept in his garden at Selborne. Timothy, as he was called, was honoured by having many records made of his movements, all written with rare touches of kindness and humour, as if the mere mention of the tortoise would always bring a smile to the writer's face.

A special diary was kept about him, from which it is clear that he was the unwilling subject of many experiments. He was dug up while asleep, to accompany his master on a journey, showing his resentment by vigorous hissing ; his pulse was felt ; he was regularly weighed at the grocer's, to determine how much weight he had lost by winter sleep, or gained by summer feeding ; and once he was placed in a vessel of water to prove if he could live in water as well as on land—much to his alarm, he being a land and not a water tortoise. In the diary are such notes as these : “ March 15th—Timothy comes forth and weighs 6 lbs. 5½ ozs. May 2nd—Timothy eats. May 14th—Timothy travelled about the garden. September 17th—When we

call loudly through the speaking-trumpet to Timothy, he does not seem to regard the noise." Most full-grown tortoises seem to be deaf.

Many people nowadays keep small tortoises in gardens



J.A.S.

Timothy caught in a rain shower

and greenhouses; they will find, if they study their habits, that even such an "abject reptile" can tell strange tales.

When treated kindly, as was Timothy, the tortoise knows those who feed it, and hobbles eagerly to greet its friends. It avoids too hot a sun by sheltering

among cabbages or asparagus, but loves warm weather. When in the autumn it buries itself, scraping out the ground with its forefeet, and throwing the soil up over its back with its hind feet, it works with a movement almost as slow as that of the hour hand of a clock. On such a warm afternoon in April as brings forth the shell-snails, the tortoise heaves up the mould, and puts out its neck—coming forth to walk abroad, as if raised from the dead. Sometimes a wandering fit seizes him, and he escapes from the garden. Though Timothy was allowed to eat freely of lettuces, poppies, kidney-beans, gooseberries, and all kinds of herbs and fruits, he would now and then hobble off to spend a holiday in meadows and beanfields.

Timothy will be ever famous among tortoises ; and a touching appeal he once made, speaking through the mouth of his master, should not be forgotten—an appeal for more consideration for the poor tortoise, torn away from the society of other agreeable creatures of its kind.

“ Let me make my case your own,” urged Timothy. “ Suppose you were to be kidnapped away to-morrow in the bloom of your life to a land of tortoises, and were never to see again a human face for fifty years ! Think on this, and pity.”

It is pleasant to think of the good clergyman and great observer thus amusing himself by writing down all kinds of whimsical ideas about his favourite tortoise—little dreaming of the pleasure his writing would give to readers all the world over—and will give through the ages.

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Timothy the tortoise hailed from America—from Virginia, whence many of his kind have made the long

journey to England. Others of our garden tortoises have been brought from Greece, or other European countries where they are abundant.

All tortoises and turtles lay white eggs, which they



"I be over a hundred"

bury in the ground, leaving the eggs, as also the young when hatched, to take their chance in life. The female Greek tortoise deposits late in summer from two to four eggs in a hole made with tail and hind feet. The young soon come out. Like all reptiles, they are well developed when hatched, and can move and feed

and generally care for themselves. After taking an airing, the little tortoises bury themselves, not showing their faces again until spring comes. They are vegetarians by nature, living on such green food as lettuce and clover-leaves, but the young ones sometimes will tackle a slug.

While the small tortoises which are kept in gardens weigh only a few pounds, there are gigantic land tortoises, hailing from islands in the Pacific Ocean, which weigh as much as seven hundred pounds, and could only be lifted from the ground by the efforts of eight or nine men.

In olden days every ship trading to such places as the Galapagos Islands took tortoises on board, as a matter of course, perhaps to the number of four hundred. Countless thousands have been killed in the past two hundred years; but for ages before the great creatures had lived in perfect peace, and had multiplied to such an extent that explorers would be able to walk perhaps for a hundred yards upon their backs. These giant tortoises each will yield two or three hundred pounds of wholesome meat, as well as fine oil.

Though so slow in their movements, and commonly so lazy, when a tortoise sets out deliberately on a journey, as when heading for water, it travels with all the perseverance of the model tortoise of the fable who beat the hare in the race, travelling day and night with scarcely a pause. But even the giant tortoise only progresses at the rate of sixty yards in ten minutes, or about four miles a day, allowing a little time for refreshment.

Cuckoo- Pint

I had remarked for years, that the root of the cuckoo-pint (*arum*) was frequently scratched out of the dry banks of hedges, and in severe snowy weather.

After observing, with some exactness, myself, and getting others to do the same, we found it was the thrush kind that scratched it out. The root of the *arum* is remarkably warm and pungent.

G. W.

A Flower that Traps Insects

WE do not find many notes about wild flowers in White's "Selborne," though in a Naturalist's Calendar, which he drew up with loving care, a great number of flowers are mentioned, and the time of their flowering, showing that the humblest wayside blossom would be sure to catch his all-seeing eyes. On January 1st he finds winter aconite in flower, and in the next day or two bearsfoot, polyanthus, double daisy, mezereon, pansy, red dead-nettle, groundsel, and the hazel bush, with its tiny crimson blossoms, so often overlooked by those who search the bushes most diligently, later on, for the nuts succeeding the blooms. In December he finds furze out in blossom, "the never-bloomless furze," and daisy, and wallflower, and snowdrop.

How exactly he observed the wild flowers, and sought to probe the secrets of their being, is well shown by the little note about the cuckoo-pint.

Everybody bred in the country knows this plant well by sight, this common arum of the hedges, which pushes up from every hedge-bank its handsome, glossy, arrow-shaped leaves in the first days of February, and then in summer sends up the curious club-shaped flowers, called by the children "lords-and-ladies," in autumn displaying on its spike a mass of lovely scarlet berries, when the rest of the plant has withered. But how few can read the riddle of the

cuckoo-pint, and explain the story of its many curious features !

Plants known by many different names usually are firm favourites, and the cuckoo-pint's names are legion. It was called Adam-and-Eve in olden days, sometimes Bulls - and - Cows, Parson - in - the - Pulpit, Wake-Robin, Adder's Meat, Arrowroot, and Portland-starch root—these last names going back to the days when a kind of arrowroot was made on the Isle of Portland from the starch of the plant's stem. But no name seems to suggest what naturalists have observed, that the pungent root is scratched out and eaten by some of the birds, who have discovered that it is pleasant, or perhaps an aid to good digestion.

The cuckoo-pint tribe of plants is noted for its poisonous properties, and some kinds are cultivated in tropical countries for the sake of their roots. Our British cuckoo-pint has so acrid a juice in its roots that a single drop of it will produce a burning feeling in the mouth ; but is wholesome enough if properly prepared, as it was of old by herbal doctors.

The leaves are beautiful, and always a welcome sight when they appear in the early days of the year, telling of better days to come. They emerge from the ground neatly furled up one within another, pointed tongues of green, gradually uncurling and separating, and growing rapidly, so that in mid-February they have reached their full size, and make welcome splashes of green in the hedges, and in the woods where the celandines are opening, to add the glint of gold to the green woodland carpet. Most of the young leaves are green all over, but some are found spotted curiously with small black marks, and later on others are found blotched over as if someone had spilt upon them great drops of purple ink. They are burning to the taste ;

and the club-shaped spadix which arises from the leaves is very unpleasant and bitter, and the scarlet berries which follow are highly poisonous, attractive as they appear.

Some of the members of this order have been noticed to give out a certain amount of heat from the spadix when the spathe, or sheath, the outer leaf, is expanding; and our cuckoo-pint by its heat will send up a thermometer several degrees if one is inserted in the spathe. The heat given off is, it would seem, to the liking of insects, since certain midges have the habit of entering the spathe to pay a visit to the flower-head which it protects.

When the cuckoo-pint is flowering in May and June, if you cut it open you will find a number of insects imprisoned within—to whom you do a good turn by setting them at liberty. When they started to creep down the club of the flower-spike they passed through a group of hairs all pointing downwards, so arranged that though they could pass in they could not pass out—and so presently they found themselves fast prisoners.

But the plant cares for its captives, and treats them to a shower of its pollen, on which they feed. After a time the hairs of the trap wither, and the midges then may crawl out, and are free once more. No doubt they do some useful work for the plant, by carrying off with them some of the pollen. Their life must be one series of adventures as they pass in and out of their flowery prisons.

**Robin
Red-
breast.**

Redbreasts sing all through the spring, summer, and autumn.

The reason that they are called autumn songsters is, because in the two first seasons their voices are lost and drowned in the general chorus: in the latter, their song becomes distinguishable.

Many songsters of the autumn seem to be the young cock red-breast of that year.

Wrens sing all the winter through, frost excepted.—G. W.



The Robin and the Wren

THE robin and the wren—their names are linked together. In the olden days country people seemed to think that Kitty Wren was the wife of Cock Robin. “The robin and the wren are God Almighty’s cock and hen,” runs the old saying.

Country people have not always shown the same kindness towards wrens as to robins.

The robin was ever a favourite among birds, because of his trustful and engaging ways, and his faithful attachment to gardens and houses. Nearly every garden has its own particular robin, and in many a cottage garden there lives a tame robin, who hops indoors to pick up crumbs at meal-time. Sometimes we have seen an old labourer sitting on a heap of flints beside a road, eating his bread-and-cheese, while a robin, a familiar friend, companion of his lonely hours of work, hops about his feet to catch the falling crumbs. “A robin in a cage,” says another good old saying, “sets all heaven in a rage.” But the little wren has been sadly persecuted, and some country boys

still think the stoning of wrens a proper country sport.

There is a legend about each bird. How did the robin come by his red breast? It was because he flew in pity to pick a thorn from the Christ's crown of thorns, and his breast was then stained for all time with holy blood. The wren has been persecuted because of some foolish old legend telling how in the dark days, when Danes invaded England, a wren flew to pick crumbs from a drum, and then sang so loud a song that he aroused the army of his country's foes, which otherwise would have been attacked as the soldiers slept. There are other legends of the same sort; it became a custom to persecute wrens on St. Stephen's Day, when "wren boys" would go about pelting the little birds in hedges, singing verses running:

The Wren, the Wren, the king of all birds,
St. Stephen's Day was caught in the furze:
We hunted him up, and hunted him down,
And hunted him all about the town.

As though to hunt him and catch him was the proper way to treat the king of all birds!

But the chief reason why we think of robins and wrens together is because they sing—the robin in autumn and in winter also, even when snow is on the ground, and the wren on mild winter days—when other songsters are silent. The sweet whistling of redbreast, and the wrens' sharp notes and merry song—these surely are among the most delightful of country sounds in winter. The robin's autumn song is for sadness—it is the song of the falling leaves. But the ringing song of the wren has in it always notes as of laughter.

Robins and wrens are birds of mystery, and give us

many puzzles to solve. What may be the real reason of the robin's red breast? Does the red breast in any way serve to conceal cock robin from his foes? We know that our own garden robin is well concealed by his colours when, at any time between late summer



*In olden days country people thought that Kitty Wren
was the wife of Cock Robin*

and early winter, he flies to a favourite perch of his in a jungle of bramble and brier, maple and thorn. The jungle is a medley of different tones, and at once the robin seems to be part of it—his bright breast is no more to the passing eye than a red-dyed bramble-

leaf, his olive-green back is only a dark shadow among the dark foliage.

Every robin has his favourite haunt. He may stay in a garden all the year round except when he disappears for a while after nesting. We have known a young robin to make himself at home through life near a pile of faggots, where, in a cottage garden, he came into the world ; his parents and brethren had retired elsewhere. But in the autumn cock robin is likely to drive his young hopefuls from his own favourite garden haunt, and there may be desperate battles, sometimes to the death. What becomes of the young robins after they have been exiled is another of the robin mysteries.

Robin is a bird who likes to keep himself to himself : solitary by nature, jealous, pugnacious, and a trifle melancholy too, if we may judge by the plaintive notes of his autumn song. The wren is a home-keeping bird too, haunting a favourite coppice, hedge, or stone wall ; but he is not one like the robin to allow himself to become a pensioner, a feeder on the crumbs of charity ; he can look after himself in all weathers. So easy is it to tame a robin by feeding him on his favourite mealworms that he will soon follow a human friend about like a spaniel, hopping after him indoors to perch on his shoulder, and take food from his hand.

The great mystery about the wren is the puzzle of the wren's empty nests. Through spring and summer we are always finding new, beautifully woven, but empty nests. Cocks' nests, country people call them ; and it may well be that the cock bird does indeed sometimes build a nest for himself. That wrens quickly desert their nests if interfered with partly accounts for the many forsaken homes. Sometimes they will return to a nest after long absence. One

nest we watched was deserted as soon as finished in the early spring ; but many weeks later the builders returned, occupied the nest and reared a large family therein.



The wren is one of the finest sentinel birds

We would often time these wrens as they fed their young ones, finding that usually they paid between them twenty visits to the nest in an hour. The little mother bird came back with food far more often than the cock bird, and he had a charming habit of sitting and trilling his little lay on the rose bush where the

nest had been built if he chanced to come back when his mate was already within.

It is worth while in winter to look into any wrens' nests late in the evening or at night, for we have known wrens to use their old nests as roosting-places, five or six cuddling inside for warmth. Before going to roost on a winter's evening in an old nest, or more usually in a snug hole in a thatched roof, in ivy, or crevices of old trees, the wrens may be heard crying "Chit, chit, chit!" to one another; and then, after a great chattering and fussing, they all go to roost together in parties of fives, tens, or even twenties.

This little mouse-like bird of the hedges, with his lively ways and pert, up-turned tail, is well known to be one of the finest sentinel birds, and is the first to raise his shrill alarm-notes on the appearance of bird or beast of prey—his notes ringing out like the rattle of a watchman of olden days.

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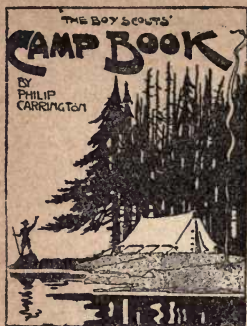
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